STUDYING THE EFFICACY AND SERVICE USERS' EXPERIENCE OF A COGNITIVE BEHAVIOUR THERAPY GROUP FOR ADULTS EXPERIENCING ANXIETY AND/OR PANIC IN A COMMUNITY MENTAL HEALTH SETTING

by

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ABSTRACT

This study examines the efficacy of a psycho-educational group for adults experiencing anxiety and/or panic using cognitive behavioural therapy (CBT) at a community mental health agency. A pre-post design was used to measure target behaviours related to anxiety and/or panic and post-intervention interviews were conducted to explore the service users' experience of the group process, content and outcome. The five pretest-posttests (Self-Rating Anxiety Scale, Anxiety Sensitivity Index-3, Mobility Inventory for Agoraphobia, Quick Inventory of Depressive Symptomatology and Agoraphobic Cognitions Questionnaire) measured eight target behaviours. Seven of the eight target behaviours for the average client showed significant improved functioning after the group in: (1) affective and somatic symptoms of anxiety (general anxiety), (2) anxiety sensitivity, (3) panic attack intensity, (4) while alone, severity of avoidance behaviour of certain common situations, (5) while accompanied, severity of avoidance behaviour of certain common situations, (6) severity of depressive symptoms, and (7) frequency of certain fearful thoughts. The target behavior, number of panic attacks experienced per week did not show any significant change from before and after the group. For the qualitative interviews, content analysis was used to analyze the verbatim interview transcripts. Seven superordinate themes emerged from the data: (1) joining the group and expectations of the group, (2) the group experience, (3) coping strategies, (4) strengths, likes and highlights of the group (5) weaknesses, dislikes and low points of the group and individuals suitable or unsuitable for the group, (6) suggestions, and (7) the interviewee's environment. There is a lack of studies investigating the efficacy and service users' experience of group CBT on anxiety and panic in community settings without using strict exclusion criteria. This study is an extension of this research and explored the latter in the context of northern British Columbia thereby addressing a research gap.

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DEDICATION

This thesis is dedicated to Henry and Eva. Doa-je lei.

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CHAPTER I: INTRODUCTION

Introduction

Many individuals are affected by mental illness[1] in Canada whether it be indirectly, directly or in the past, present or possible future (Canadian Mental Health Association [CMHA], 2008a; Health Canada, 2002). Health Canada (2002) estimates that "twenty percent of Canadians will personally experience a mental illness during their lifetime" (p.15). Its affects span across ages across educational level, income levels, socio-economic status and cultures (CMHA, 2008a). If a Canadian has not been directly affected by mental illness then they may know someone close to him or her who has been.

Anxiety disorders[2] are the most prevalent mental illness in Canada (Canadian Mental Health Association [CMHA], 2008a; Health Canada, 2002), with approximately 12% of Canadians affected by one or more anxiety disorders during a one-year period (Offord et al., 1996). The cost of mental illnesses to the Canadian health care system was estimated to be at least $7.3 billion in 1993 (Health Canada, 2002, p.7) and approximately $7.9 billion in 1998 (CMHA, 2008a).

Cognitive behavioral therapy (CBT) interventions, implemented in research based settings, have been shown to be effective in decreasing problematic symptoms and issues related to anxiety disorders (American Psychological Association, 1995; Roth & Fonagy, 2005). However, there is a lack of studies investigating the efficacy and service users' experience of these interventions once transplanted to routine community mental health settings without strict exclusion criteria (Borkovec & Castonguay, 1998; Chambless & Hollon, 1998; Marchand et al., 2008, Oei & Boschen, 2009; Wade, Treat & Stuart, 1998).

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[1] The definition is in the literature review section (on page 8), Why is anxiety and panic important?
[2] The definition is in the literature review section (on page 9), Why is anxiety and panic important?

The goal of this study is to evaluate the efficacy and service users' experience of one such CBT group for adults experiencing anxiety and/or panic conducted through a community mental health agency, the Community Acute Stabilization Team (CAST) in Prince George, British Columbia, Canada. This study implemented triangulation by using a pre-post design to measure target behaviours related to anxiety and/or panic while post-intervention interviews were conducted to illuminate the group process and experiences of clients.

Epistemological Framework, Worldviews and Assumptions

The epistemological framework, worldview and assumptions underlying this study are founded on reflexive-therapeutic and individualistic-reformist views of social work and other caring professions (Payne, 2005). Reflexive-therapeutic views focus on therapeutic relationships with a client to improve individual and community health and wellness. It emphasizes the interaction and exchange of ideas between the client and social worker for personal development and progress (Payne, 2005). A social worker practicing from an individualistic-reformist view would try to help individuals without challenging existing societal systems and structures (Payne, 2005, p. 9). Both these outlooks originate from a personal problem-solving approach and although some reference may be given to the social context of mental health this reference is often minute.

All approaches have strengths and weaknesses, and these two approaches are no exception. The underlying worldview in this thesis is not to emphasize that any one worldview or perspective is better than the other. Simply and practically, the concepts and definitions discussed in this thesis are prevalent and used in Canadian mental health settings and are part of the context in which mental health interventions and treatments are normally run. All words can

have countless definitions. To help ensure congruency through this thesis and among reader knowledge a definition of terms has been provided.

Definition of Terms[3]

Agoraphobia: Fear and avoidance of situations in which escape might be difficult or embarrassing, or in which help might not be available in the event of a panic attack or panic-like sensations (Antony, 2001, p. 11).

Anxiety: Intense, inappropriate and maladaptive reactions that are characterized by uneasiness, dread about future events, a variety of physical responses (such as muscle tension, increased heart rate, sweating) and avoidance of the feared events. Anxiety is inappropriate or unrealistic when its intensity is disproportionate to the actual situation. Intense anxiety interferes with our normal, everyday functioning (Spiegler & Guevremont, 1993, p.195).

Spiegler & Guevremont (1993) state,

> Early theorists made a distinction between fear and anxiety. Fear referred to apprehension concerning a tangible or realistic event, whereas anxiety referred to apprehension about something intangible or unrealistic. Some theorists have considered fear to be emotional and anxiety to be cognitive in nature. In general, behaviour therapists have not found it useful to distinguish between the two concepts (p.195).

Anxiety attack: Refer to panic attack.

Anxiety disorder(s): Refer to literature review section (on page 9), Why is anxiety and panic important?

Anxiety sensitivity: Fear of anxiety related symptoms. There are individual differences in what people think will happen to them when they experience anxiety. When they experience anxiety, people with "high" anxiety sensitivity may worry about panic attacks, mental illness, or heart attacks. In contrast, individuals with "low" anxiety sensitivity may believe that anxiety sensations are unpleasant but harmless (Reiss, Peterson, Taylor, Schmidt, & Weems, 2008, p. 3-4).

Cognitive behaviour therapy: Refer to literature review section (on page 11), Cognitive behaviour therapy.

Comorbidity: The simultaneous presence in an individual of two or more mental or physical illnesses, diseases or disorders (VandenBos, 2007, p. 202).

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[3] These stated definitions are not intended to discount concepts, values and beliefs of other worldviews but to build a framework for the reader to understand some of the underlying assumptions related to this study. This recognition of other ways of knowing applies to the entire content in this study and it will be assumed that the reader bares this in mind throughout this document.

Depression: A feeling or emotion that involves sadness, feelings of worthlessness, or even guilt. This feeling is accompanied by a desire to be alone rather than with others, and disturbances of appetite, sleep and general activity (R. York, 1997, pp. 99-100).

Efficacy: Competence in behavioural performance, especially with reference to a person's perception of his or her performance capabilities (VandenBos, 2007, p. 315).

Mental health and illnesses: Refer to literature review section (on page 8), Why is anxiety and panic important?

Panic: A sudden, uncontrollable fear reaction that may involve terror, confusion and irrational behaviour, precipitated by a perceived threat (e.g. earthquake, fire or being stuck in an elevator) (VandenBos, 2007, p. 667).

Panic attack: (the) *DSM-IV-TR* identifies a number of anxiety disorders but begins by describing panic attacks on the grounds that (though not a distinct disorder) their ubiquity across anxiety disorders justifies separate definition (Roth & Fonagy, 2005, p. 150). A panic attack is a discrete period in which there is the sudden onset of feelings of intense apprehension, dread, fearfulness, or terror, often associated with feelings of impending doom... in which four (or more) of the following symptoms developed abruptly and reached a peak within 10 minutes: (1) palpitations, (2) sweating, (3) shaking, (4) shortness of breath, (5) feelings of choking, (6) chest pain, (7) nausea or abdominal distress, (8) dizziness, (9) derealization, (10) fear of losing control, (11) fear of dying, (12) numbness or tingling sensations and (13) chills or hot flashes (American Psychiatric Association [APA], 2000, p. 429 & 432).

Pre-post design: An experimental design characterized by the administration of a pretest and posttest to one or more groups of participants (where the reactions of the group of participants are measured before and after exposure to the treatment) (VandenBos, 2007, pp. 106 & 644). This study uses one group of participants so to be more specific the design in this study is also called a one group pre-post design but in this thesis the term pre-post design will mainly be used for readability.

Psycho-educational group: group work (that) emphasizes using educational methods to acquire information and develop related meaning and skills (Brown, 1997, p. 1 cited in Gladding, 2003).

Overview of Research Study

There are two parts to this study: (1) Pre-post design and, (2) Post-intervention interviews (See Table 1). These two parts collectively try to address the research question: What is the efficacy of the CAST panic and anxiety group, a group run by a community mental health agency for adults experiencing anxiety and/or panic. Part 1, the pre-post design addresses the

research question by measuring program outcomes for clients through the measurement of eight target behaviours related to anxiety and/or panic, (1) affective and somatic symptoms of anxiety (general anxiety), (2) anxiety sensitivity (fear of anxiety related symptoms), (3) number of panic attacks experienced per week, (4) panic attack intensity, (5) while alone, severity of avoidance behaviour of certain common situations, (6) while accompanied, severity of avoidance behaviour of certain common situations, (7) severity of depressive symptoms and (8) frequency of certain fearful thoughts. These behaviours related to anxiety were hypothesized to be lower at the end of treatment (the CAST panic and anxiety group). Part 2, the post-intervention interviews addresses the research question by examining the client experience of the group process, content and outcome, which helps to clarify what aspects of being in the group are helpful. Incorporating a pre-post design and interviews together helps diminish information gaps that may exist if only one methodology was used. Using two methods rather than one method, shows a truer, richer and more holistic way of addressing the research question and adds credibility and confidence to the findings.

Although the data for the two parts of the study (the pre-post design and interviews) were both: (1) analyzed by the researcher of this thesis and (2) attained from a sample who all attended the CAST panic and anxiety group at some point in time; There are differences between the two parts (the pre-post design and interviews) in the following ways: (1) the research questions addressed, (2) the sample size, (3) the experimental design, (4) the measures used, (5) the year clients attended the group, (6) who designed the research methodology and (7) who collected the data (See Table 1). The pre-post design was incorporated into the panic and anxiety group intervention prior to the researcher starting the study. Thus, the pretest-posttests were not selected by the researcher but by a CAST employee who designed the group. Although

Table 1

Overview of Study

Features of Study	Study	
	Pre-Post Design	Post-Intervention Interviews
Research questions and hypotheses	Overall Question: What is the efficacy of the Community acute stabilization team (CAST) panic and anxiety group for clients?	
	Pre-post design: The target behaviour measured of clients will be lower at the end of the CAST panic and anxiety group than at the beginning	Interviews: What is the client experience of the group process, group content, and outcomes?
Sample size	34 clients	3 interviewees
Experimental design	Longitudinal (pre and post-intervention)	Cross-sectional (post-intervention)
Measures (Pretests-posttests)	• Self-rating Anxiety Scale (SAS) • Anxiety Sensitivity Index-3 (ASI3) • Mobility Inventory of Agoraphobia (MIA) • Quick Inventory of Depressive Symptomatology (QIDS) • Agoraphobic Cognitions Questionnaire (ACQ)	Semi-structured interview
Program intervention attended by sample:	CAST panic and anxiety group 10 weekly sessions (2 hour sessions)	Same as pre-post design
Program intervention manual:	CAST panic and anxiety group manual	Same as pre-post design
Year that client attended group	2006 - 2009	2008 – 2009
Research methodology designed by:	CAST employee	Researcher of this thesis
Data collection by: (year collected)	CAST facilitators (2006-2009)	Researcher of this thesis (2008-2009)
Data Analysis by:	Researcher of this thesis (No active data collection by researcher. Post-collection analysis only.)	Researcher of this thesis (Same as pre-post design but for interviews, researcher involved in design, collection and analysis.)

facilitators varied for some of the groups, each followed a manual and set schedule. The pretest posttest tools are in the first and last session handouts and collected by group facilitators prior to and throughout this study; thus, there was no active data collection on the part of the researcher, nor any contact between the researcher and client regarding the pretests-posttests.

This study was approved by the University of Northern British Columbia (UNBC) Research Ethics Board and the Northern Health Authority (NHA) Research Ethics Board and has a letter of support from the Community Acute Stabilization Team (See Appendix A, B and C).

CHAPTER II: LITERATURE REVIEW

This section will discuss: (1) anxiety, panic, mental health and anxiety disorders and why these are important to study and (2) how these disorders are treated.

Why is Anxiety and Panic Important?

Everyone experiences anxiety and panic; however, the anxiety and panic mainly discussed in this study are not the regular type of anxiety and panic that most people find manageable. Rather, this study is concerned with anxiety and panic mainly in anxiety disorders that significantly affects the mental health and well-being of individuals.

A Report on Mental Illnesses in Canada, RMIC (Health Canada, 2002) describes mental illnesses as,

> characterized by alterations in thinking, mood or behaviour (or some combination thereof) associated with significant distress and impaired functioning over an extended period of time" (p.16).

While a similar description by the *Diagnostic and Statistical Manual of Mental Disorders-Text Revision, DSM-IV-TR* (American Psychiatric Association [APA], 2000) states,

> each of the mental disorders is conceptualized as a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress... or disability... or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom. In addition, this syndrome or pattern must not be merely an expectable and culturally sanctioned response to a particular event, for example, the death of a loved one. Whatever its original cause, it must currently be considered a manifestation of a behavior, psychological, or biological dysfunction in the individual (p.xxxi).

Of the selection of definitions available these were chosen from the documents, *RMIC* (Health Canada, 2002) and the *DSM-IV-TR* (APA, 2000) for two reasons in general, (1) the prominence of these works in the mental health field and (2) their relevance to the Canadian context. The *DSM-IV-TR* (APA, 2000) is ubiquitous and widely-used in Canada and is "considered the

standard for clinical evaluation" (Zide & Gray, 2001, p.xvii). *RMIC* is the one of the most recent Canadian documents compiling Canadian data on mental illnesses (Health Canada, 2002).

In further discussion of mental illnesses and disorders the *DSM-IV-TR* (APA, 2000) and *RMIC* (Health Canada, 2002) recognize the interconnectedness of mental and physical health. Both point out and acknowledge that physical health can affect mental health and mental health can affect physical health. In addition, Health Canada (2002) states the symptoms of mental illness vary from mild to severe, depending on the type of mental illness, the individual, the family and the socio-economic environment (p.16).

The mental disorders predominately discussed in this thesis are anxiety disorders. Anxiety disorders are

> a group of disorders in which anxiety is either the predominant disturbance or is experienced in confronting a dreaded object or situation or in resisting obsessions or compulsions. In the *DSM-IV-TR* (APA, 2000) the disorders include panic disorder without agoraphobia, panic disorder with agoraphobia, agoraphobia without history of panic disorder, specific phobia, social phobia, obsessive-compulsive disorder, posttraumatic stress disorder, acute stress disorder, generalized anxiety disorder, anxiety due to a general medical condition, substance-induced anxiety disorder and anxiety disorder not otherwise specified. Not included are conditions in which the anxiety is due to another mental disorder, such as schizophrenic or affective disorder (VandenBos, 2007, p.63).

Of all the mental health illnesses in Canada, the most common are anxiety disorders (Canadian Mental Health Association, 2008b). Thus, it is important to examine the efficacy of interventions that help to treat anxiety disorders and find out what can work for individuals.

Agoraphobia, high levels of anxiety, anxiety sensitivity, panic, panic attacks, and depression (See definition of terms) are all symptoms, reactions and/or disorders that can happen to someone experiencing an anxiety disorder. These challenges often detrimentally affect the emotional, physical, mental, and social well-being of individuals experiencing anxiety disorders.

Anxiety and panic may act as a barrier for an individual to participate in healthy life activities. It can affect an individual's interpersonal relationships with family, friends and acquaintances, and it may increase isolation of the individual from interpersonal support. For example, individuals experiencing an anxiety disorder may have difficulty completing important every day types of tasks. For instance, a person who experiences a panic attack while speaking to an acquaintance may feel shame or isolation and even begin to fear these anxiety related symptoms (termed anxiety sensitivity), and, avoid similar situations which make everyday tasks such as going to the grocery store extremely difficult. For instance, depression is often co-currently experienced by those experiencing an anxiety disorder. Depression can affect eating and sleeping habits, leading to an unhealthy loss of weight or lethargy. These challenges can decrease an individual's quality of life. The overall well-being of someone experiencing panic, panic attacks, high anxiety levels and/or high anxiety sensitivity can be compromised unless the individual is able to manage the symptoms.

How Can Anxiety and Panic Be Treated?

Cognitive Behavioural Therapy

There is support in the literature that cognitive behaviour therapy (CBT) and behaviour therapy are empirically validated treatments for anxiety disorders (American Psychological Association, 1995; Roth & Fonagy, 2005). The CAST panic and anxiety group treatment uses many different cognitive behaviour therapies. CBT is one type of approach among many other therapeutic approaches and is one of the predominant therapies used with individuals who experience panic and/or anxiety.

CBT is composed of two different models of theories, behaviour models of therapy and cognitive models of therapy (Payne, 2005; Masters, Burish, Hollon & Rimm, 1987). Traditional

models of behavioural therapy focus on changing or modifying an individual's actions and behaviour through consequences (such as reinforcement or rewards). Outcomes of behavioural therapy do not necessarily result in changes to an individual's thoughts or thinking patterns, as problematic behaviors are the target of intervention. Alternately, cognitive models of therapy focus on changing or restructuring thoughts and thinking patterns, which cognitive theorists believe will affect and change an individual's behaviour. For example, an individual may tell himself, "Everyone hates me" but these thoughts can be restructured with more balanced thoughts such as, "This person might not like me but, that does not mean everyone dislikes me", which in turn can lead to the person feeling less anxious. Payne (2005) describes cognitive-behavioural methods as "therapeutic procedures which focus on changing thoughts and feelings along side, instead of as a precursor to, changing behaviours" (p. 122). Most contemporary behaviour therapy practitioners incorporate at least some type of cognitive model of therapy into their practice and do not strictly use only traditional behaviour therapy. The cognitive behaviour therapies and techniques described in this thesis are those used in the CAST panic and anxiety group. These strategies are discussed in the next section: (1) diaphragmatic breathing, (2) cognitive restructuring, (3) interoceptive exposure and (4) real-life exposure.

Cognitive Behaviour Therapy Techniques

Diaphragmatic breathing. Diaphragmatic breathing training is a relaxation technique from a traditional behavioural therapy approach (Corey, 2005). In diaphragmatic breathing, counsellors instruct individuals to: (1) find a comfortable position to sit in, (2) to inhale a deep breath through his or her nose for a lower-chest (diaphragmatic) breath, (3) to hold this breath in, (4) inhale another breath through his or her nose to fill the upper chest (thoracic) breath and (5) then exhale through the mouth (Barlow & Cerny, 1988, p. 162). This is done at least five times in

a row. The approach assumes relaxation is incompatible with fear, anxiety and/or panic. The key concept of this technique is that if an individual practices a behaviour (in this case relaxation through breathing exercises) that is incompatible with fear, anxiety or panic, and, "interrupts the panic cycle" then symptoms (such as shaking or sweating) will decrease (Corey, 2005; Craske & Barlow, 2007, p.86). For example, it is difficult to be anxious and relaxed at the same time. Diaphragmatic breathing training is used to help relax and calm an individual (Barlow & Cerny, 1988; Corey, 2005; Craske & Barlow, 2007). Diaphragmatic breathing can involve cognitions. Although anxious feelings and inaccurate thought patterns can manifest themselves in physical symptoms, such as shaking and sweating, this diaphragmatic breathing is a behavioural technique because of the main focus on symptoms and behaviours. In the panic and anxiety group this exercise is taught in the second session and practiced for ten to fifteen minutes. This coping technique builds on other techniques and vice versa and it is expected that clients practice it in their daily lives. These two latter points apply to all the coping techniques taught in the group.

Cognitive restructuring. Three cognitive restructuring therapy models will be discussed: (1) thought stopping, (2) rational emotive behaviour therapy (REBT, previously known as rational emotive therapy) and (3) cognitive distortions. Thought stopping exclusively focuses on cognitions of the mind, REBT mainly emphasizes cognitions with some behaviour therapy methods and cognitive distortions amalgamate both cognitive and behaviour therapy approaches (Corey, 2005; Masters et al., 1987; Spiegler & Guevremont, 1993).

Thought stopping. The basic premise of thought stopping is to substitute an unwanted or negative thought with a more pleasant one. A client may experience intrusive thoughts that occupy a significant part of his or her day. To "thought stop" a client is taught that when the

intrusive thought occurs to verbally say "stop" in an abrupt, assertive and startling way to interrupt the thought. When the intrusive thought is interrupted the client then replaces it with an alternative and more pleasant thought. This additional step is necessary, as simply trying to stop thinking one thought may result in an increase in the original unwanted thought. The client brainstorms at least two alternative pleasant thoughts to replace the intrusive thought with and uses either of them during the practice of thought stopping. After continuous practice of this technique, there generally is a decrease in frequency and duration of the intrusive thoughts (Spiegler & Guevremont, 1993). Over time some clients may substitute the verbal statement of "stop" with imagining a red stop sign in their minds, stating stop in their self-talk rather than out loud or something else that he or she finds effective. This thought stopping is an example of a purely cognitive based theory in practice. The CAST panic and anxiety group teach a technique called "Stop-refocus-breathe" (SRB) were it incorporates thought stopping in "stop-refocus" and diaphragmatic breathing, in the last step of "stop-refocus-breathe".

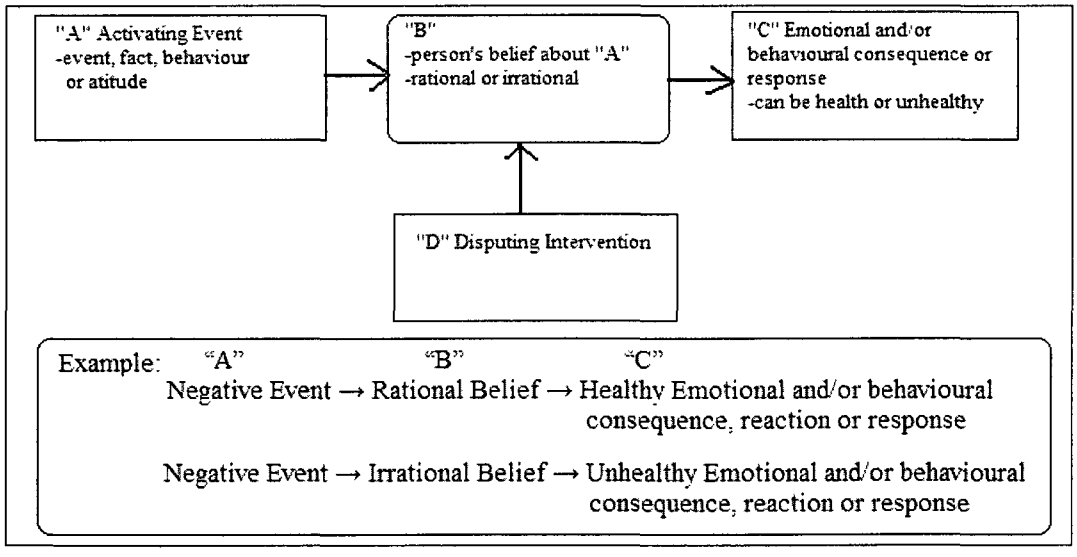

Figure 1. ABC Model. This figure illustrates Ellis's ABC model used in the panic and anxiety group (Corey, 2005, p. 274; Masters et al., 1987; Mulhauser, 2009; Payne, 2005, pp.121-122; Spiegler & Guevremont, 2003, pp. 35-37).

Rational emotive behaviour therapy. Albert Ellis is considered one of the grandfathers of CBT and he developed REBT (Corey, 2005; Masters et al., 1987; Spiegler & Guevremont, 1993). In REBT, Ellis postulated that individuals carry out self-talk in their thinking and he inferred that negative self talk and blaming lead to maladaptive behaviour[4]. Core principles of REBT are that individuals: (1) have the capacity for rational and irrational thinking, (2) can have a tendency to have irrational thinking that may be distorted or not realistic and, (3) are continually self-talking, self-evaluating and self-sustaining (Corey, 2005).

REBT is based on Ellis's ABC model "which suggests that activating events (i.e., adversities) are mediated by irrational beliefs in determining inappropriate behavioral consequences" (VandenBos, 2007, p.1). The ABC model describes an individual experiencing an activating event or antecedent, termed "A" (See Figure 1). "A" can be an event, fact, behaviour or attitude. This activation event, "A" exists before an individual follows through with a behaviour, "C". The ABC model theorizes that the activation event, "A" does not produce "C", the emotional and/or behavioural response or consequence of an individual. The model stipulates that it is actually "B", the person's belief about what happened in the activating event that consequently results in "C", the person's emotional or behavioural response or consequence (Corey, 2005, p. 274; Masters et al., 1987; Mulhauser, 2009, Payne, 2005, pp.121-122; Spiegler & Guevremont, 2003, pp. 35-37). Ellis describes the person's belief, "B" as either rational or irrational and stipulates that if the belief is rational then a healthy emotional and/or behavioural consequence or response, "C" would occur; while for an irrational belief than an unhealthy emotional and/or behavioural response would occur. The ABC model is an acronym where "A" stands for the **A**ctivating event, "B", is an individual's **B**elief regarding the activating event, and

[4] Maladaptive behaviour may have been a coping mechanism for an individual at one point in time however the behaviour is termed maladaptive because the individual may feel this behaviour no longer serves a helpful function or purpose.

"C" is the person's emotional or behavioural response or **C**onsequence (Corey, 2005; Masters et al., 1987; Spiegler & Guevremont, 1993). What Ellis proposes is that if there is a **D**isputing intervention, "D" in the ABC model, at "B", the person's belief about the activating event, then there is a possibility of changing a person's belief about that event (Corey, 2005; Masters, 1987; Spiegler & Guevremont, 1993).

One of Wilson's (1996) eight attitudes of recovery (also known as healing or inoculating attitudes list) will be used to illustrate the ABC model. Each attitude of recovery challenges an expected attitude. For example, if an individual experiencing anxiety tells herself, "I have to relax right now", that adds more stress and pressure to the individual in an already anxious situation (Wilson, 1996). In the ABC model, the experiencing of anxiety could be considered the activating event (A), her self-statement "I have to relax right now" (Wilson's expected attitude) is a belief about the activating event which could be considered "B" and the possible consequence of additional stress and pressure could be considered point "C". Using the "ABC" model a therapist could teach the client to realistically challenge the belief, "I have to relax right now" by challenging it with the statement, "It's O.K. to be anxious here" (Wilson's attitude of recovery), where often acceptance of the anxiousness reduces the anxiety giving a different consequence (Wilson, 1996). This re-statement could be considered "D", the disputing intervention that leads to a possibly new "C", consequence of less anxiety. These processes can lead to the individual feeling less anxious. The ABC model postulates once an unrealistic belief is rationally disputed, this will produce a different effect and a new feeling. While at the same time it is important for clients to practice "coping skills (such as diaphragmatic breathing) and quieting (their) thoughts (but to)...not make relaxation a demand" (Wilson, 1996, p. 183).

Another expected attitude Wilson (1996) lists is "I must be certain that there is no risk" can be challenged with a more realistic attitude of recovery, "I can tolerate uncertainty". For more details of the other six attitudes refer to Wilson (1996).

Cognitive distortions. The examples of self-defeating beliefs or thoughts described in "B" (of the ABC model) are termed cognitive distortions (also known as irrational beliefs). Both Albert Ellis, creator of REBT and Aaron Beck, creator of cognitive therapy independently developed lists and descriptions of common cognitive distortions[5] (Corey, 2005; Spiegler & Guevremont, 1993). Some examples of the cognitive distortions are: (1) absolute thinking or polarized thinking, (2) overgeneralization, (3) catastrophizing, (4) magnification and minimization, and (5) probability overestimation (Anthony & McCabe, 2002; Corey, 2005; Spiegler & Guevremont, 1993, p. 298). A major principle of CBT is that cognitive distortions can be disputed, challenged, and restructured (Corey, 2005; Spiegler & Guevremont, 1993).

Polarized thinking involves individuals perceiving the world in absolutes where there is no grey area and an all-or-nothing type of thinking. Using a previous example, the statement of "I have to relax now" would be classified as polarized thinking since the absolute statement of "have to" allows little room for other options. A CBT counsellor would encourage the client to see that there are more perspectives in how to see the situation, rather than it has to be one or the other. Individuals often create strict "must, shoulds, woulds" that they try to live by that are irrational and unrealistic. Ellis believes "in actuality there are few things we 'must' do to stay alive so these thoughts Ellis disputed were irrational" (Spiegler & Guevremont, 1993, pp. 298-299). This is an all-or-nothing type of thinking. Overgeneralization describes an individual making a blanket statement about a specific incident to other or all aspects of his or her life.

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[5] Self-defeating thoughts are referred to as irrational thoughts by Albert Ellis and cognitive distortion is the term Aaron Beck uses (Corey, 2005; Spiegler & Guevremont, 1993).

Catastrophizing describes an individual expecting the worst to continue happening from a particular incident or perceiving a "small incident as disastrous" (Spiegler & Guevremont, 2003, pp. 310 & 320). In Beck's cognitive therapy, catastrophizing is an example of the cognitive distortion, termed "arbitrary inference," which occurs when an individual groundlessly infers what will happen in the future based on insufficient or even contradictory proof or support. Magnification and minimization describes how an individual can amplify certain events beyond their contextual impact, while diminishing the significance of other events. For example, an individual with panic disorder may magnify the times he has difficulty coping during a panic attack, while minimizing the times he copes well with panic. Overestimating probabilities involves an individual overestimating the chances that a negative event will occur to that individual or others. Cognitive restructuring involves challenging and disputing these cognitive distortions and then replacing them with alternative beliefs that are more realistic and self-helping (See ABC model in Figure 1).

An important factor in cognitive restructuring is that an individual needs to become aware of her or his thoughts and feelings (Corey, 2005; Masters et al., 1987; Spiegler & Guevremont, 1993). The REBT and cognitive therapy model assumes that a person cannot change his or her thoughts if he or she is not aware of them. Ellis discusses the need for detecting, debating and discriminating in the disputing intervention "D" (See Figure 1) (Corey, 2005; Masters et al., 1987). Outside of counselling sessions, clients are assigned homework so that valuable information can be gathered and used for debating and discriminating against self-defeating cognitive distortions. An example of homework a counsellor may assign is to ask a client to identify and record: (1) situations when he or she is faced with a challenge or difficulty, (2) the automatic thoughts he or she has about the situation, (3) any cognitive distortions or

logical errors in his or her thinking, and (4) alternative evidence and counter statements (Corey, 2005; Spiegler & Guevremont, 1993; Wilson, 1996).

Interoceptive exposure. Interoceptive exposure is a technique that involves clients exposing themselves to fears that they believe negatively impact their lives through the modes of artificial simulation and imagery. This involves clients intentionally and artificially inducing and simulating an internal sensation leading to feelings and symptoms of anxiety and/or panic. Some types of exercises used to induce symptoms of anxiety and/or panic are spinning in a chair for one minute to produce dizziness or breathing through a straw to simulate the feeling of restricted air flow. During these sensations of artificially induced panic and/or anxiety participants can visualize a situation in real-life that she or he has encountered that may evoke these types of sensations. This is called imagery (also known as imaginal exposure). Imagery can also be used on its own.

The goal of interoceptive exposure is to give participants an opportunity to learn to better control and cope with symptoms of panic in a safe environment, where professional counsellors are available. For example during the simulation of dizziness, clients can practice the coping strategy diaphragmatic breathing. The idea of anxiety and panic can be abstract and individuals can develop fear around not knowing what to expect when anxiety and/or panic strikes. With interoceptive exposure the individual has a greater sense of control over his or her symptoms of anxiety and/or panic and feeling of powerlessness because he or she is the one who is intentionally inducing these sensations. When an individual does experience anxiety and/or panic in his or her daily life the intent is that clients are better equipped to cope in these situations due to practicing relaxation or other coping strategies during interoceptive exposure.

In the CAST panic and anxiety group, interoceptive exposure is performed in a safe, controlled and supportive environment with facilitators and group members. Participants choose whether or not they want to participate actively in the exercises and are reminded explicitly about this choice.

Real-life exposure. Real life exposure is a technique that involves clients exposing themselves to fears that they believe negatively impact their lives through the mode of real-life situations and experiences. Real-life exposure (also known as in vivo exposure and naturalistic exposure) is the final technique taught in the CAST group. Barlow & Cerny (1988) emphasize it is important to:

> remind the client that the purpose of the coping skills is not to "fight the anxiety" but rather to keep the anxiety at a manageable level, allowing the full extent of exposure therapy to take place. Thus, the client should not try to prevent anxiety from developing; in fact, he/she should welcome anxiety as an opportunity both to practice management skills and to receive the full impact of therapy (p. 168).

The CAST panic and anxiety group introduces graded real-life exposure to clients and encourages them to work on this with their individual counsellor at CAST. The "graded" refers to setting up a hierarchy. In graded real-life exposure, the hierarchy breaks task experienced in general life, such as a basic every-day task, that triggers anxiety into many smaller and manageable steps while placing these steps in a hierarchy. For instance, a client may experience anxiety or panic about going to a supermarket, and, as a result is fearful of repeating the experience. Real life exposure asks clients to imagine this event and break it down into controllable steps. Bourne (2000) gives an example of a hierarchy for shopping in a supermarket:

> (1) With your partner, sit in the parking lot and look at the store, (2) With your partner, walk to the door and remain there for one to five minutes, (3) Without your partner, walk in and out of the door (In steps 3-7, have your partner wait outside the store), (4) Walk to the first aisle alone, (5), Walk one-quarter of the way to the back of the store alone, (6) With your partner, remain in the back of the store for one to five minutes, (7) remain in the store, browsing in different areas, alone for five to ten minutes (p. 414).

This hierarchy cuts down the task of going to and shopping at a supermarket into a series of lesser tasks.

Additional goals of exposure are to help clients: (1) uncouple the cues for fear and anxiety with the association of panic, panic attacks and moderate and high anxiety, (2) have clients directly experience and realize that some fears are not real threats, and (3) to use the skills learned in the group. Examples of skills learned in the group are cognitive restructuring and diaphragmatic breathing, to cope with panic, anxiety and panic attacks, so that they can learn that they have power over these symptoms. The next section will discuss research studies that examine the efficacy of these theories and techniques.

Cognitive Behaviour Therapy Research Outcomes

The CAST panic and anxiety group is a modified version of the panic control treatment (PCT) (Barlow & Cerny, 1988; Barlow & Craske, 1989; Barlow & Craske, 1994; Craske & Barlow, 2001; Craske, Barlow & Meadows, 2000). The PCT is comprised of education about anxiety and panic, training in diaphragmatic breathing, cognitive restructuring, interoceptive exposure and real-life exposure (for more details refer to Chapter III, panic and anxiety group section, Treatment) (Barlow & Cerny, 1988; Barlow & Craske, 1989; Barlow & Craske, 1994). This short-term treatment model has been demonstrated to be successful in "reducing panic attacks across multiple samples" (Teng et al., 2008, p. 705). The PCT is conducted weekly over fifteen sessions, in either individual or group work, where the duration of the sessions typically range from an hour and a half to two hours (Barlow & Craske, 1989; Barlow & Craske, 1994; Craske & Barlow, 2001; Craske et al., 2000; Barlow, Craske, Cerny & Klosko, 1989; Teng et al., 2008; Wade et al., 1998).

There have been numerous studies researching the effectiveness of Barlow & Craske's (1989, 1994) panic control treatment (Barlow et al., 1989; Hoffmann & Spiegel, 1999; Teng et al., 2008; Wade et al., 1998; Wolfe & Maser, 1994). A study by Barlow et al. (1989) compared a waitlist group (sample size, N =15) to three treatment groups. Treatment one used applied muscle relaxation training (N=10), treatment two used cognitive-interoceptive treatment (diaphragmatic breathing retraining, cognitive restructuring and interoceptive exposure)(N=15), and treatment three combined relaxation training and cognitive-interoceptive treatment (N=16) (Barlow et al., 1989). Refer to Barlow & Cerny (1988), for details on the combined treatment.

Participants were recruited from the Phobic and Anxiety Disorders Clinic (State University of New York at Albany) who were self-referred or referred by agencies or clinicians. The treatments were weekly individual therapy sessions conducted over fifteen weeks (Barlow et al., 1989). Waitlist individuals were told that if they had a crisis help would be available. All research participants were asked to conduct daily self-monitoring on anxiety, depression and panic attacks for two weeks prior to and after treatment. Individuals in the waitlist group continued the self-monitoring during the fifteen week treatment period and were contacted by therapists every two to three weeks via phone to discuss each person's self-monitoring records. Of completers involved in the study, Barlow et al., (1989) found that 85% of clients in cognitive-interoceptive therapy no longer experienced panic attacks over a two week interval post-treatment. The percentage of panic-free participants in the other groups where, 36% for the waitlist group, 60% in the relaxation group and 87% in the combined group (Barlow et al., 1989). Cognitive-interoceptive therapy and the combined group were found to be significantly different compared to the relaxation group and the wait list group.

Of completers involved in the study, Barlow et al., (1989) found that 85% of clients in cognitive-interoceptive therapy no longer experienced panic attacks over a two week interval post-treatment, whereas the percentage of panic-free participants in the other groups where 36% for the waitlist group, 60% in the relaxation group and 87% in the combined group. Cognitive-interoceptive therapy and the combined group were found to be significantly different compared to the relaxation group and the wait list group.

This supports previous conclusions by the Task force[6] on promotion and dissemination of psychological procedures, Division of Clinical Psychology (American Psychological Association, 1995) that cognitive behaviour therapy is a well-established empirically validated treatment for panic disorder with or without agoraphobia. The criteria created by the Task force for empirically-validated well established treatments were:

> (1) At least two good group design conducted by different investigators, demonstrating efficacy in one or more of the following ways: (A) superior to pill or psychological placebo or to another treatment, (B) equivalent to an already established treatments in studies with adequate statistical power (about 30 per group; cf. Kazdin & Bass, 1989) or (2) a large series of single case design studies demonstrating efficacy. These studies must have: (A) used good experimental designs and (B) compared the intervention to another treatment as in 1A" (American Psychological Association, 1995, p.21).

Wade et al.'s (1998) study suggests that a panic control treatment conducted in empirically controlled settings for research can be effective for adults with Panic disorder (PD) with or without agoraphobia in a community mental health centre (CMHC). The PCT was conducted with over 15 weekly sessions with 110 individuals, where 82.7% participated in a group format, 11.8% participated in an individual format, and 5.5% participated in a combination of individual and group format (Wade et al., 1998). Refer to Barlow & Craske (1994) for the treatment

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[6] The Task force on promotion and dissemination of psychological procedures (Division of Clinical Psychology) was formed by the American Psychological Association who selected experts in the field to conduct and analyze existing research to assess how empirically validated types of mental health treatment were for different types of mental health issues (American Psychological Association, 1995).

protocol. Wade et al., (1998) found that at the CMHC 87.2% of clients participating in the PCT reported being panic-free after the treatment which is an increase of 69.0% from 18.2%, the pre-treatment proportion of participants. Other treatment outcomes for CMHC clients in the PCT were significant decreases in the mean number of self-reported panic episodes in the past week, the mean self-reported anticipatory anxiety, mean self-reported general anxiety and mean self-reported depression. The anticipatory anxiety, general anxiety and depression means were self-rated daily from a Likert scale, where 0 equaled none and eight equaled very severe. Wade et al. (1998) found similar results to other studies (Barlow et al., 1989 & Telch et al., 1993) on PCT for anxiety scores, the proportion of clients panic free, and beck depression inventory scores.

Another mode of treatment for individuals experiencing panic and/or anxiety is pharmacology. Levitt et al. (2001) suggest that due to "questionable incremental effectiveness and greater cost... the combination of CBT and pharmacotherapy may not be indicated as the first-line (of) treatment" (p. 485). However, benefits have been noted:

> The addition of CBT to pharmacotherapy might be indicated for the following three conditions: (1) to treat agoraphobic symptoms of panic disorder with agoraphobia, (2) to reduce withdrawal effects during medication taper, and (3) to alleviate symptoms of panic in adequately treated patients whose symptoms do not respond to pharmacotherapy (Levitt et al., 2001, p. 485).

Of interest are some studies of PCT in relation to pharmacology.

Alprazolam is a benzodiazepine medication prescribed for the treatment of panic disorder and has been found to be effective (Ballenger et al., 1988; Davidson & Moroz, 1998; Hoffmann & Spiegel, 1999; Spiegel, 1998). However, numerous studies have shown the trend that discontinuation of alprazolam can have a high proportion of relapse rates (Fyer et al., 1987; Hoffman & Spiegel, 1999; Pecknold, Swinson, Kuch & Lewis, 1988). Hoffman & Spiegel (1999) stated "several small studies have found administration of PCT concurrently with drug

taper and discontinuation markedly improved the ability of panic disorder patients to stop and remain abstinent from benzodiazepine use" (p.8). The combination of PCT with pharmacology has been a well-accepted treatment (Wolfe & Maser, 1994; Uhlenluth, 1998). If benzodiazepines are prescribed while a client is in a PCT, Hoffman & Spiegel (1999) suggest that is should be on a temporary basis (such as a client's symptoms have become overwhelming or impairing), but with the expectation that the benzodiazepine will be tapered off during the PCT.

In a study with individuals with Panic disorder with agoraphobia (Klosko, Barlow, Tassinari and Cerny, 1990) the researchers compared a waitlist group to three treatment groups where one treatment group used alprazolam, a second treatment used a placebo and the third used PCT (Refer to Barlow & Cerny (1988) for the treatment protocol). In this study, the waitlist group may be considered a minimal treatment group since clients in the waitlist group were required to have been stabilized on medication, were not required to discontinue medication, were contacted weekly by telephone and were told they could contact the clinic by phone if they felt the need. Klosko et al. (1990) found that for completers of the treatments; 87% in the PCT group, 50% in the alprazolam group, 36% of the placebo group and 33% of the waitlist group were panic-free in the two weeks post-treatment. These proportions were found to be significant in the PCT compared to the alprazolam and placebo group. Although the alprazolam group had a higher percentage of panic-free participants than the placebo group, this difference was not statistically significant.

Research on the efficacy of group CBT in community settings in Canada is needed especially since only a few studies have been conducted on the area this thesis focuses on. This thesis focuses on the transportability of group CBT in routine community mental health settings where clients present with different anxiety disorder presentations and are not excluded on the

basis of medication usage or comorbidity of disorders (Oei & Boschen, 2009; McEvoy & Nathan, 2007). An example of this is in Australia where Oei & Boschen (2009) studied the efficacy of group CBT at a private hospital for adult outpatients diagnosed with a variety of anxiety disorders and did not exclude clients on the basis of medication usage or comorbid disorders. McEvoy & Nathan (2007) carried out a similar study in an Australian community mental health clinic. Westbrook & Kirk (2005) conducted an efficacy study on CBT (where there was no standard treatment manual) for adults at a non-university community mental health clinic in the United Kingdom funded by the British National Health Service. Although, this study has high external validity it did not study group CBT.

Some studies have tried to increase the external validity of their study. Wade et al. (1998) and Wade, Treat & Stuart (2000) studied the efficacy of individual and group CBT where out-patients clients were not excluded on the basis of medication usage, severity or frequency of panic attacks, age or the presence or severity of agoraphobia. This shows that Wade et al. (1998 & 2000) did not have many of the strict exclusion criteria of most clinical research trials but their sample only included clients with an assessment of panic disorder with agoraphobia or without agoraphobia. This limits the generalizability of their findings to clients with other anxiety disorder presentations in routine community mental health settings.

Many "efficacy studies exclude participants on the basis of age, comorbid diagnosis, medical problems, treatment history, use of medications or personality dysfunction" (Wade et al., 1998, p.232), while in routine community mental health practice there generally is a more expanded version of exclusionary criteria (Borkovec & Castonguay, 1998; Chambless & Hollon, 1998; Marchand et al., 2008, Oei & Boschen, 2009; Wade et al., 1998). These types of differences mean that although the CBT is well studied in experimental research, these

empirically validated outcomes may not completely translate into community settings. My study is an extension of the present research on the efficacy and service users' experience of group CBT in routine community mental health practice in Prince George, northern British Columbia, Canada.

CHAPTER III: PANIC AND ANXIETY GROUP

Treatment Providers

The Prince George Community Acute Stabilization Team (CAST) (formerly known as Clinical Day Services and Psychiatric Outpatient Services), is a community mental health outpatient department that offers different individual and group mental health interventions to adult clients. CAST is located in Prince George, the interior of British Columbia operating under the Northern Health Authority (NHA) and the Mental Health and Addiction team. Services are free of charge and publicly funded. The CAST staff is composed of registered psychiatric nurses, social workers, psychologists and counsellors[7]. Facilitators of the panic and anxiety group are self-selected from among the CAST staff. The group is facilitated by two CAST staff members at any one time. Approximately six different CAST staff facilitated the group during the time period looked at by this study.

Close adherence to the 'Panic and Anxiety Group' treatment protocol and manual has effectively maintained treatment fidelity and consistency to the treatment protocol. First, each manual for participants and facilitators have remained the same during the time period of 2006 to 2009 inclusive, which is the time period for this study. Second, there is a facilitator who has facilitated the group by specifically following the manual during the time period of this study and continues to do so (as of the printing of this thesis) and she has facilitated over 75% of the panic and anxiety groups during this time period (primary facilitator). This fact supports the contention that the manual has been followed consistently. Third, in their first panic and anxiety group, new facilitators observed the primary facilitator teaching the psycho-educational material

[7] At CAST the term counsellor can refer to staff with a Master's degree in education specializing in counselling but many CAST staff refer to themselves as counsellors or therapists to clients regardless of their discipline. The terms counsellor, therapist and/or facilitator are used interchangeable at CAST when referring to group work and will be used with the same intent in this thesis.

while the new facilitator discussed the homework material. This arrangement continued across at least one group (ten weeks) or more until the new facilitator who observed the psycho-educational component of the group felt comfortable teaching the material. Then the roles switched where the primary facilitator covered the homework material while the other facilitator taught all or some of the psycho-educational materials depending on the arrangement made between the facilitators. Through-out this time, the primary facilitator gave direct feedback to the other facilitator and vice versa.

Treatment

The purpose of the CAST's panic and anxiety psycho-educational group is to teach the participant "how to alter his or her responses to panic (and anxiety) by learning to change the way he or she thinks and the way he or she reacts physically or behaviourally" (Northern Health Authority, 2006, p.2). The group intervention is composed of ten weekly sessions and each session is two hours long. At the same time, individuals in the panic and anxiety group have access to on-going one-on-one support from counsellors and psychiatrists if necessary. Groups start with seven to eight participants and two facilitators.

In the first session, participants are given an overview of what will be covered during the ten sessions and are introduced to five pretests-posttests tools. Facilitators explain and give instructions for each pretest-posttest and answer any questions. Facilitators explain to participants that these pretests-posttests are given out during the first and last session to help clients and facilitators keep track of the client's progress and status, to understand what areas a client might want to work on, and to help in program evaluation. At the beginning of a session, each participant is provided a handout for that particular session. The syllabus that is covered over the ten sessions is available in Table 2.

Table 2

CAST Panic and Anxiety Group Syllabus Available in First Session Handout.

Session I: • introduction of group leaders and members • general group guidelines (such as confidentiality, attendance and participation) • panic group outline • assessments (pretests) • homework (a daily anxiety and panic graph)	Session II: • brief discussion of homework • education on physiology of panic • learning about panic attacks • components of panic • relaxation breathing • grounding • homework (anxiety log, relaxation breathing practice and read articles provided, "It's only your nerves" and "10 best ever anxiety management techniques")
Session III: • discussion of homework (anxiety logs and breathing) • learning about anxiety • components of anxiety • homework (continue previous anxiety logs and breathing and identify own anxiety components	Session IV: • homework discussion • learning about changing attitudes and inoculating beliefs • review negative beliefs, limiting beliefs, acceptance and positive behaviour • homework (anxiety logs and breathing exercises and identifying a helpful inoculating belief or attitude)
Session V: • homework discussion identifying early symptoms of panic • looking at anxiety and panic sequences • using the anxiety scale to develop coping strategies • "Stop-refocus-breathe" exercise (SRB) and "Breathing, relaxation and coping statement" exercise • Homework (anxiety logs and breathing exercises and practice using coping strategies to control anxiety)	Session VI: • home work discussion • cognitive monitoring tutorial • probability overestimating and catastrophizing • underestimating your ability to cope • homework (continue previous logs)
Session VII: • home work discussion • complete cognitive monitoring • identifying and challenging distortions • homework (continue previous logs)	Session VIII: • home work discussion • introduction to exposure • interoceptive exposure • homework (continue previous logs)
Session IX: • home work discussion • real life exposure • getting the most out of exposure • working on hierarchies • continued exposure • homework (continue previous logs)	Session X: • home work discussion • group evaluation • post assessments (posttests)

The panic and anxiety group uses multiple types of cognitive behaviour therapy and techniques by combining (in no particular order): (1) the panic control treatment (Barlow & Cerny, 1988; Barlow & Craske, 1989; Barlow & Craske, 1994), (2) Wilson's eight attitudes of recovery (1996) and, (3) graded real-life exposure (Barlow & Cerny, 1988; Barlow & Craske, 1989; Barlow & Craske, 1994; Bourne, 2000). The components of the Panic Control Treatment (Barlow & Cerny, 1988; Barlow & Craske, 1989; Barlow & Craske, 1994) used in the panic and anxiety group and manual (in order presented to clients) includes: (1) education about panic and panic attacks, (2) diaphragmatic breathing training, (3) cognitive restructuring, (4) interoceptive exposure and, (5) graded real-life exposure. Most of the content in the panic and anxiety group and manual is from the PCT (Barlow & Cerny, 1988; Barlow & Craske, 1989; Barlow & Craske, 1994). The educational component of the CAST panic and anxiety group (PA group) manual incorporates additional information from Bourne's (2000) *The Anxiety and Phobia Workbook* and Wilson's (1996) *Don't Panic: Taking Control of Anxiety Attacks*. As well, the PA group manual uses real-life exposure hierarchies from Bourne (2000) and information on Wilson's (1996) eight attitudes of recovery. The panic and anxiety group manual and intervention is mainly a condensation of the PCT (with less emphasis on graded real-life exposure) supplemented with information from Bourne (2000) and Wilson (1996) as described above.

CHAPTER IV: PRE-POST DESIGN METHODOLOGY & FINDINGS

Research Questions and Hypotheses

The key research question of this study is: What is the efficacy of the Community Acute Stabilization Team (CAST) panic and anxiety group for clients? Rather than listing an almost identical research hypothesis eight times in succession each with a different target behavior, a broad research hypothesis (H_r) is stated as follows:

- H_r : The "target behaviours measured[8]" of clients will be lower at the conclusion of the CAST panic and anxiety group than at the beginning,
- H_r : Post-test scores will be significantly lower than pre-test scores.

Each of the eight target behaviours listed in Table 3 is to be interchanged for the quoted "target behavior measured".

For example,

- H_r : The "affective and somatic symptoms of anxiety (general anxiety)" of clients will be lower at the conclusion of the CAST panic and anxiety group than at the beginning.

The Null Hypothesis (H_o) is as follows, where each of the eight target behaviours listed in Table 3 is to be interchanged for the quoted "target behaviors measured":

- H_o : The "target behaviours measured" for clients will the same at the beginning and conclusion of the CAST panic and anxiety group.

For example,

- H_o : The "general anxiety" of clients will the same at the beginning and conclusion of the CAST panic and anxiety group

[8] The term target behaviour is considered interchangeable with outcome variables (See Table 3).

Table 3

Target Behaviours and Respective Pretest-Posttests.

Target behavior related to anxiety (also known as outcome or study variables)	**Respective Pretest-posttest Measuring Target behaviour**
Affective and somatic symptoms of anxiety (General anxiety)[a]	Self-rating Anxiety Scale (SAS)
Anxiety sensitivity (Fear of anxiety related symptoms)	Anxiety Sensitivity Index-3 (ASI3)
Number of panic attacks experienced per week	Mobility Inventory of Agoraphobia (MIA)
Panic attack intensity	MIA
While alone, severity of avoidance behaviour of certain common situations	MIA
While accompanied, severity of avoidance behaviour of certain common situations	MIA
Severity of depressive symptoms	Quick Inventory of Depressive Symptomatology (QIDS)
Frequency of certain fearful thoughts	Agoraphobic Cognitions Questionnaire (ACQ)

[a] Affective and somatic symptoms of anxiety will be described interchangeably with the term general anxiety.

Measures

Self-Rating Anxiety Scale

The Self-Rating Anxiety Scale (SAS; Zung, 1971) is a 20-item self-rated instrument based on the *DSM-II* (American Psychiatric Association, 1968) criteria for anxiety disorder to measure the affective and somatic symptoms of anxiety of a respondent in a one week time frame (See Appendix D). The items are answered on a four-point Likert scale ranging from "none or little of the time" to "most or all of the time" (scored as 1 to 4 depending on whether or not the statement is positively or negatively stated) with the total raw scores adding from 20 to 80 (Zung, 1971). The higher the score the higher the anxiety and low scores suggest lower anxiety. Of the 20 items 5 are affective symptoms (items 1-5) and 15 are somatic symptoms (items 6-20). Five items (items 5, 9, 13, 17 and 19) have reversed scores to reduce response bias.

The SAS has good test-retest reliability (Michelson & Mavissakalian, 1983) and adequate convergent validity (Jedge, 1977 cited in Olatunji, Deacon, Abramowitz & Tolin, 2006). The scale is part of the public domain and available in the original article (Antony, 2001; Zung, 1971).

Anxiety Sensitivity Index – 3

There are three versions of the Anxiety Sensitivity Index (ASI; Reiss, Peterson, Gursky & McNally, 1986; ASI-Revised; Taylor & Cox, 1998; ASI3; Taylor et al., 2007). The second version of the ASI, the Anxiety Sensitivity Index-Revised (ASI-R) was used in the data collection of this study. The most recent version, Anxiety Sensitivity Index-3 (ASI3) can be extrapolated[9] from the ASI-R that was used in this study. The extrapolated ASI3 was used in this study over the ASI-R because the ASI3 has better psychometric properties than the ASI-R (S. Taylor, personal communication, July 8, 2008; Taylor et al., 2007). The ASI3 subscales have acceptable internal consistency, discriminant validity and criterion-related validity (Taylor et al., 2007). The original 16-item ASI has been prominently used in the literature so the use of this scale in this study may have been preferable for comparisons to other studies but the original ASI cannot be extrapolated from the ASI-R.

The Anxiety Sensitivity Index –3 (ASI-3; Taylor et al., 2007; see also Reiss et al., 1986) is an 18-item self-report scale that measures anxiety sensitivity, "the fear of anxiety related symptoms", (Reiss et al., 2008, p.3) (See Appendix E for a sample of 3 items on the ASI-3, reprinted with permission from the IDS Publishing Corporation). Anxiety sensitivity refers to the fears that an individual has about how anxiety and the sensations associated with it can manifest itself in harmful ways (Mclean & Woody, 2001; VandenBos, 2007). "Clinicians have long noted

[9] The ASI3 can be extrapolated from the ASI-R because the 36-item ASI-R has all the 18 items found in the ASI3.

that some clients are better able to tolerate the sensations of anxiety than others are" (Mclean & Woody, 2001, p.43). The ASI-3 has three subscales, physical concerns, cognitive concerns and social concerns (6 items each). The items are answered on a five-point Likert scale ranging from "very little" (scored as 0) to "very much" (scored as 4) (Taylor et al., 2007).The ASI-3 is copyrighted and reprinted with permission (www.anxietysensitivityindex.com).

Mobility Inventory for Agoraphobia

The Mobility Inventory for Agoraphobia (MIA; Chambless, Caputo, Jasin, Gracely, & Williams, 1985) is a 26 item self-report scale devised to measure severity of avoidance behaviour of 26 common situations and an additional item for "other category" that can be specified by whoever is filling out the scale (See Appendix F). Situations included as items on the scale are theatres, supermarkets and elevators. Each item (or situation) is rated on a five-point Likert scale ranging from "never avoid" (scored as 1) to "always avoid" (scored as 5) (Chambless et al., 1985). Respondents are asked to rate each situation according to when she or he is "accompanied" or when she or he is "alone", which results in each situation being rated twice. In addition the scale provides the definition of a panic attack and then asks the rater the number of panic attacks he or she has experienced in the past 7 days and the intensity of those panic attacks on a scale of 0 to 8, where 8 is the worst.

The MIA has high test-retest reliability and excellent internal consistency for both subscales (Chambless et al., 1985). There is support for acceptable convergent validity and good discriminant validity for both subscales of the MIA (Chambless et al., 1985; Craske, Rachman & Tallman, 1986). "Since its publication nearly two decades ago, the Mobility Inventory has become one of the gold-standard measures for assessing severity of agoraphobic avoidance behaviours" (Rodrigue, Pagano & Kelly, 2007, p.752). With permission from the creator,

Chambless, the MIA is available for clinical and research purposes on the website at Chambless (2002).

Quick Inventory of Depressive Symptomatology

The Quick Inventory of Depressive Symptomatology, self-rating ($QIDS\text{-}SR_{16}$; Rush et al., 2003) is a 16 item self-report scale based on the *DSM-IV* (American Psychiatric Association, 1994) criteria for major depressive episode developed to measure the severity of depressive symptoms (See Appendix G). The nine criteria symptom domains included (1) sad mood, (2) concentration, (3) self-outlook, (4) suicidal ideation, (5) involvement, (6) energy/fatigability, (7) sleep disturbance, (8) appetite/weight increase/decrease and (9) psychomotor agitation/retardation (Rush et al., 2003). Each item is rated from 0-3. A total score of 0-5 translates as no depressive symptoms, 6-10 as mild, 11-15 as moderate, 16-20 as severe and 21-27 as very severe. See website for calculation of overall scores (University of Pittsburg Epidemiology Data Centre, 2009).

The $QIDS\text{-}SR_{16}$ has high internal consistency and adequate concurrent and content validity (Rush et al., 2003). The $QIDS\text{-}SR_{16}$ version is under the public domain and available on the website at the University of Pittsburg Epidemiology Data Centre (2009).

Agoraphobic Cognitions Questionnaire

The Agoraphobic Cognitions Questionnaire (ACQ; Chambless, Caputo, Bright & Gallagher, 1984) is a 14-item self-report scale designed to measure the frequency of certain fearful thoughts related to panic attacks and agoraphobia that can occur (See Appendix H). Each item is a different fearful thought, such as "I am going to throw up" (Chambless et al., 1984). "The ACQ was constructed to measure the cognitive aspect of fear of fear'' (Olatunji et al., 2006, p.546). The items are answered on a five-point Likert scale ranging from "thought never

occurs" (scored as 1) to "thought always occurs when I am nervous" (scored as 5) (Chambless et al., 1984).

The ACQ has good internal consistency and adequate test-retest reliability (Chambless et al., 1984). Results from Zgourides, Warren & Englert (1989) support "construct validity for the (ACQ) when used to assess anxiety disorders in general" (p. 590). The ACQ has good discriminant validity in distinguishing between clinical samples from non-clinical samples but low discriminant validity distinguishing between individuals with agoraphobia and individuals with social phobia (Craske et al., 1986). Note the CAST panic and anxiety group permits clients with different types of anxiety disorders to join and uses the ACQ to assess frequency of certain thoughts for individuals with anxiety disorders in general, where, it is not necessarily crucial to distinguish between individuals with different anxiety disorders, such as individuals with agoraphobia or with social phobia. With permission from the creator, Chambless, the MIA is available for clinical and research purposes on the website at Chambless (2002).

Pre-Post Design Method

This part of the study uses a pre-post design. Each client completed five outcome measures that measure a particular target behaviour during the first session (pretest) and again during the last group session (posttest) as a means to measure client progress (R. York, 2009) (See Table 3 for the eight target behaviours and their respective pretests-posttests). Prior to completing these, group facilitators inform clients that these are used for program evaluation, in addition to clients and facilitators tracking client progress. Participation in the group is voluntary. Verbal agreement and participation in completing the measures are taken by the program as consent and there are no signed consent forms. These are standard procedures of the program and

not the researcher. The pretests-posttests are confidential and placed in a secure location after the group.

Synapse, a confidential electronic data base at the Northern Health Authority (NHA), was used by the researcher to collect demographics of clients who completed the pretests-posttests. The researcher gained access to the data base in spring 2008 and examined data from fall 2006 to spring 2009.

As with all studies there are limitations to the pre-post design in this study. The common threats to internal validity (history, maturation, testing effects, instrumentation, statistical regression, attrition and selection) are addressed in this section. "An experiment has internal validity when one can make strong inferences about cause and effect, inferring with confidence that the independent variable rather than an extraneous variable has produced the observed differences in the dependent variable" (Singleton & Straits, 2005, p. 187).

History, maturation, testing effects and instrumentation are potential threats to the internal validity of this study. History effects refer to the history that happens in a person's surrounding environment that can affect treatment outcomes, in this case the target behaviours (Singleton & Straits, 2005). An example would be an economic recession resulting in a group member's loss of employment. Whereas, maturation refers to personal psychological or physical changes that happen to a person with the passage of time (Singleton & Straits, 2005). Testing effects "refers to changes in what is being measured that are brought by reactions to the process of measurement" and instrumentation "refers to unwanted changes in characteristics of the measuring instrument or in the measurement procedure" (Singleton & Straits, 2005, p. 189). To help address threats of history, maturation, testing effects and instrumentation a control or waitlist group could act as a baseline that the treatment group could be compared to, but due to

the lack of a control group in this study these threats were not be controlled for in this study. However, this control group design in clinical research and practice is less practical and more expensive than the design used in this study which is commonly found in clinical research (Singleton & Straits, 2005). There is also a compromise to internal validity because some variables are missing data (for example, the second page of some measures were randomly missing, a threat to instrumentation). Unfortunately the conditions for the pretest-posttest data collection were previously decided and the researcher had no control over the measures, sample or method design used.

Statistical regression refers to "the tendency for extreme scorers on a test to move (regress) closer to the mean or average score on a second administration of the test" (Singleton & Straits, 2005, p. 189). Statistical regression may have an affect on this study since clients referred to this group are generally experiencing anxiety and/or panic and may have higher or more extreme scores than the average CAST client (who may also experience anxiety); however, clients were not selected for the treatment due to extreme scores.

Attrition refers to the loss of participants in a study and is controlled for in this study. The attrition threat is controlled for

> effectively... because only data from those subjects observed before and after the treatment would be used in analyzing the effects of the independent variable (Singleton & Straits, 2005, p. 193).

Like all studies, the research conducted in this study cannot generalize to all scenarios. There are some selection biases since for this study the sample was not taken randomly, as the research sample were active CAST clients and clients self-selected by choosing whether or not to join the group. This study's research can still be speculatively generalized to other community settings with similar demographic characteristics of the research sample (such as gender, age and

geographic distribution). For example this study is better suit to be speculatively generalized to more isolated northern Canadian communities and less generalizable to community settings without similar demographic characteristics, such as city centres that are larger, more metropolitan and have greater accessibility to resources than Prince George which can be isolated since it is located in northern British Columbia, Canada.

The external validity of this study is strong because of its relevance in real-life community clinical practice, despite the compromises to internal validity. External validity "refers to the extent to which a study's findings have meaning outside the particular circumstance of the experiment" (Singleton & Straits, 2005, p. 189). In routine community mental health clinical practice, clients are not deferred from treatment because they have had any of the following examples happen in the last six months, (1) they have had changes in their medication, (2) started a new medication, (3) are seeing a different counsellor, (4) started counselling, (4) have had a stressful, life-changing or traumatic incident occur (such as the death of a loved one or a health concern). However, these are the types of exclusion criteria used most of the time in controlled clinical trials that reduces their transferability to routine community settings and their external validity. These are the things that happen that often bring clients to treatment because they are trying to find what works for them and to deal with their current life circumstances. It simply is not practical in routine community mental health to have these types of exclusion criteria. That is why the level of external validity, it's generalizability to these circumstances is strong in this study since it does not use these types of exclusion criteria and is conducted in a routine community mental health setting.

Sample for the Pre-Post Design

Of the CAST panic and anxiety groups started and completed within fall 2006 and spring 2009, 62 clients began the panic and anxiety group and took the pretest tool. Of those 62 clients, 36 clients attended the groups and completed the posttest tool, while 26 clients did not complete the posttest tool. One participant attended the group twice, only data for the first attendance time was included. Data from the second attendance was excluded because the pairs of data must be independent of each other for data analysis using statistical parametric or non-parametric tests. Two participants attended the panic and anxiety group twice also, however data was only available for the second attendance. These two cases were excluded from the data analysis for the reason that these two participants may have differed somehow from the group of participants who attended the group the first time. The study sample is comprised of these 34 clients who completed the CAST group.

Each participant was referred to the group by individual counsellors, who assessed whether the group would be a good fit for the client and vice versa. Clients participating in the group are often identified as experiencing anxiety, panic and/or as having an anxiety disorder. Consistent with the research literature, exclusion criteria for the group are those who are organically impaired, in an acute clinically depressed state, psychotic or are substance addicted (Barlow et al., 1989; Klosko et al., 1990; McQuarrie, 2002; Telch et al., 1993). These criteria were assessed by the client's counsellor at CAST.

The age of participants ranged from 21 to 75 (N=34) with an average age of 43.3 years old (SD = 12.6), median of 44.5 and the most commonly reported ages were 22, 45, 47, 55 and 58. There were more women (79.4%) than men (20.6%) where 27 of the 34 participants were women. All participants (N=34) reported English as their preferred language (94.1%), however

2 participants reported not speaking or reading English (5.9%). Panic and anxiety group facilitators suggest this may have been a typing error in computer system because anyone who could not read the material nor follow along would not have been suitable for nor admitted to the group. The percentage of participants who attended some high school education (47.1%) was slightly larger than those who had some post-secondary education (38.2%). Information about education level was missing for five of the 34 clients (14.7%).

On average, participants attended 88.7% (SD = 13.0) of group sessions (N=34)[10]. Note two of the groups had a total of 9 sessions rather than 10 and so a percentage was taken to give the demographics information for attendance. Attendance ranged from 44.4 to 100.0% with the most common reported attendance of the panic and anxiety group at 100.0% and a median of 90.5%. For attendance, the 25th percentile (bottom 25%) was at 80.0% and 75th percentile (top 25%) was at 100.0%, which means 75% of the participants attended 80.0% of the group sessions and 25% of the participants attended 100.0% of the group sessions.

At the time of intake, the percentage of participants employed in the labour force was 50.0% (29.4% were employed full-time and 20.6% were employed part-time) while data from 1 (2.9%) of the 34 clients was missing (n=33).

At the time of intake, 44.1% of participants were married, 23.5% were single, 8.8% were common-law, 5.9% were divorced and 5.9% were widowed while data from 4 (11.8%) of the 34 clients were missing.

Clients in the sample (N=34) were assessed with provisional clinical disorder diagnostic impressions and/or provisional personality disorders diagnostic impressions using *Axis I*

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[10] Initially the panic and anxiety group started with a total of 9 weekly sessions. This was extended to a total number of 10 sessions by splitting the material from the original 3rd session into session 3 and session 4. This relabeled session 4 as session 5 and so on until session 10. The first two panic and anxiety cohort groups were covered in 9 sessions and the cohort groups thereafter were covered in 10 sessions. All groups covered the same material.

(Clinical disorders) and *Axis II* (personality disorder) of the *DSM-IV-TR* (APA, 2000). This was assessed within 10 months or less of attending the group:

- Co-morbidity of a depressive disorder (dysthymic and major depressive disorders) and one or more anxiety disorders, 13 clients (38%)
- One or more anxiety disorders only, 11 clients[11] (32%)
- Depressive disorder only, 7 clients[12] (21%)
- Bipolar I disorder, 1 client (3%)
- Provisional assessment was deferred, 2 clients (6%).

Out of the 34 clients, 20 were provisionally diagnosed with a depressive disorder (59%), which includes those assessed with a depressive order only and co-morbidity of a depressive disorder with an anxiety disorder.

Out of the 34 clients, 24 were provisionally diagnosed with an anxiety disorder. The 24 clients were assessed as follows at the time of intake (within 10 months or less of attending the group):

- Generalized Anxiety Disorder (GAD), 8 clients (33%)
- Anxiety disorder not otherwise specified (NOS), 3 clients (13%)
- Posttraumatic stress disorder (PTSD), 3 clients (13%)
- Social phobia, 3 clients (13%)
- Obsessive-compulsive disorder (OCD), 2 clients (8%)
- Panic disorder with agoraphobia, 1 client (4%)
- Panic disorder with agoraphobia and GAD, 1 client (4%)
- Anxiety disorder NOS, Panic disorder with agoraphobia and OCD, 2 clients (8%)
- Anxiety disorder NOS, Panic disorder without agoraphobia and OCD, 1 client (4%).

Clients in the sample (N=34) were assessed with provisional psychosocial and environmental problems diagnostic impressions using *Axis IV* (Psychosocial and environmental factors) of the *DSM-IV-TR* (APA, 2000) within 10 months or less of clients attending the group. All clients were provisionally assessed as having one or more psychosocial and environmental problems:

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[11] Two clients of these 11 were provisionally diagnosed as being in-full remission of a depressive disorder.

[12] Two of the 7 clients had a provisional diagnosis querying the presence of an anxiety disorder (PTSD and OCD).

- Occupational problems, 10 clients (29%)
- Problems with primary support group, 10 clients (29%)
- Economic problems, 7 clients (12%)
- Problems related to the social environment, 2 clients (6%)
- Educational problems[13], 1 client (3%)
- Other psychosocial and environmental problems, 17 clients (50%).

The reason these numbers add up to greater than the sample size of 34 is due to the fact that 12 clients were assessed with more than one of these categories (35%).

Data Analysis

The data was analyzed using the computer software, Statistical Program for the Social Sciences (SPSS) with consultation from quantitative research instructors and a statistician. Analysis of demographic variables was performed using SPSS EXPLORE and FREQUENCIES.

SPSS EXPLORE was used to evaluate if the assumptions of normality are satisfactory using the Komogorov-Smirnov test (K-S test) with test statistic, *D* (Fields, 2005, p. 94).

> If the test is non-significant ($p > .05$) it tells us that the distribution of the sample is not significantly different from a normal distribution (i.e. it probably normal). If, however the test is significant ($p < .05$) it tells us that the distribution in question is significantly different from a normal distribution (i.e. it is non-normal) (Fields, 2005, p. 93).

Paired sample *t* tests or sign tests were performed on eight variables (or target behaviours) listed in Table 3: (1) affective and somatic symptoms of anxiety (general anxiety), (2) anxiety sensitivity (fear of anxiety related symptoms), (3) number of panic attacks experienced per week panic attack intensity, (4) panic attack intensity, (5) while alone, severity of avoidance behaviour of certain common situations, (6) while accompanied, severity of avoidance behaviour of certain common situations, (7) severity of depressive symptoms and (8) frequency of certain fearful thoughts. If the distribution of difference scores were normally distributed, the paired sample *t* test was used (Fields, 2005, p. 289-295; Green & Salkind, 2005,

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[13] "Educational problems—e.g., illiteracy; academic problems; discord with teachers or classmates; inadequate school environment" (APA, 2000, p.31)

p. 162). If the data did not meet the assumptions of the paired-sample *t* test then the non-parametric test, Sign test was used (Green & Salkind, 2005, p. 396-405; Fields, 2005, p. 534). The p-values stated are for one tailed tests and were set at 0.05.

To control for Type I errors, the alpha was set at 0.05. If this alpha was decreased to decrease the Type I error in this study then respectively, the Type II error would increase and there would not be enough power for the statistical tests in this study (Coolican, 2004, p.334). Since there is one overall research hypothesis, the alpha can be set at 0.05 for the entire investigation which is termed "experiment-wise probability" (Klockars & Sax, 1986, p.17; P. Madak, personal communication, June 20, 2010). In this study there is one overall research hypothesis for the eight sub-hypotheses, which is, the target behaviours related to anxiety and/or panic will be lower at the end of treatment compared to before treatment. Since an experiment-wise probability is used in this study the alpha of 0.05 is appropriate despite conducting multiple statistical tests.

To control for Type II errors in this study there needs to be sufficient power. To decrease potential Type II errors and to increase the power, the alpha could be increased for this study however, this would increase the chances of Type I errors (Coolican, 2004, p.383). The most ideal scenario is to control for Type I and Type II errors, which can be a challenging balance. The researcher deemed it appropriate to maintain the alpha at 0.05 to control for Type I errors as an experiment-wise probability. At the same time we want to have sufficient power to control for Type II error. Power can be increased by increasing the sample size (Coolican, 2004, p.383-384). Previously there was a sample of 27 clients but to increase the power of the study the data was not analyzed until a sample of 34 clients was collected by group facilitators.

In evaluating whether or not there are any significant outliers, variable boxplots were surveyed for outliers and *z*-scores were calculated to ascertain whether any outliers were significant outliers (Fields, 2005, p. 76). Guidelines from Fields (2005) were followed where,

> we can use these (*z*) scores and count how many fall within certain important limits. If we take the absolute (for example we ignore whether the z-scores is positive or negative) then in a normal distribution we'd expect about 5% to have absolute values greater than 1.96 (we often use 2 for convenience) and 1% to have absolute values greater than 2.58 and none to be greater than 3.29 (p.76).

In the distribution figures, such as Figure 2 (See page 49), the bottom and top line of the T-shaped lines protruding out of the boxes are the minimum and maximum range, respectively, the thicker line within each box is the median, the bottom line of each box is the 25th percentile, the top line of each box is the 75th percentile (top 25%) and the box (25th percentile to 75th percentile) represents the middle 50% of the scores (Fields, 2005, p. 75).

For effect size statistics, the standardized effect size index, *d* (*d*=*t*/squareroot'n' or *d*=*z*/squareroot'n') were calculated, where "*d* values of .2, .5, and .8 regardless of sign are by convention, interpreted as small, medium and large effect sizes respectively" (Green & Salkind, 2005, p. 163) and the percentage of overlap is 85%, 67% and 53% respectively (Coolican, 2004, p. 385). "The percentage of overlap is the percentage area overlap of" the pre-treatment population and post-treatment population (Coolican, 2004, p. 385).

To calculate the level of power for a paired sample *t* test the δ (delta) statistic was used, δ= *d* * squareroot'n' (delta=effect size x squareroot'n') and then a δ table (table for power as a function δ and significance level) was consulted for the value for power (Coolican, 2004, pp. 387 &.663). "The power of a test is the probability that a given test will find an affect assuming that one exists in the population. Cohen (1992 cited in Fields, 2005, p. 33) suggests that we would hope to have a .2 probability of failing to detect a genuine effect, and so the corresponding level

of power that he recommended was 1 - .2, or .8. We should aim to achieve a power of .8 or an 80% chance of detecting an effect if one genuinely exists." The levels of power calculated should be slightly higher because the δ table consulted only alpha for a two-tailed test where alpha= .02 was the closest available to this study's one-tailed test (alpha=.05) (See Table 4 on page 48).

A series of analyzes, Repeated Measures Analysis of Variance (Repeated measures ANOVAs or RMANOVAs) were conducted to examine client characteristics as predictors in changes in client functioning. Eight target behaviours (the dependent variables) were analyzed for differences in client characteristics (the between-subject factors independent variable) over time (the within-subject factors independent variable). The eight target behaviors analyzed were (1) affective and somatic symptoms of anxiety (general anxiety), (2) anxiety sensitivity (fear of anxiety related symptoms), (3) number of panic attacks experienced per week panic attack intensity, (4) panic attack intensity, (5) while alone, severity of avoidance behaviour of certain common situations, (6) while accompanied, severity of avoidance behaviour of certain common situations, (7) severity of depressive symptoms and (8) frequency of certain fearful (See Table 3 for respective pretest-posttests). The between-subjects factors were (1) education, (2) attendance, (3) age and (4) employment and the within-subjects factor was time (pre and post-treatment). Medians for attendance percentage was used as the cutoff point to break the sample into two groups of relatively equal size for comparison and the same was done for the factor, age.

Tests for sphericity for the RAMANOVAs were not necessary since, "the assumption of sphericity is meaningful only if there are more than 2 levels of a within-subjects factor" (Fields, 2005; Green & Salkind, 2008, p. 234). This study has only two levels of the within-subjects factor time (pre-treatment and post-treatment). SPSS EXPLORE was used to assess if the

assumptions of normality are satisfactory using the Komogorov-Smirnov test (K-S test) with test statistic, *D* (Fields, 2005, p. 94; Green & Salkind, 2008, p. 234; SPSS Inc., 2008).

The last analyzes conducted were correlations between the percentage of attendance by clients and difference scores (posttest scores minus pretest scores). These were calculated using the Pearson product-moment correlation coefficient, *r* (Green & Salkind, 2008, p. 257-264).

> Where a correlation of +1 indicates that as scores on (one variable) increase across cases, the scores on (the other variable) increase precisely at a constant rate. If *r* is positive, low scores on (one variable) tend to be associated with low scores on (the other variable), and high scores on (one variable) tend to be associated with high scores on (the other variable). If *r* is zero, low scores on (one variable) tend to be associated equally with low and high scores on (the other variable), and high scores on (one variable) tend to be associated equally with low and high scores on (the other variable). In other words, as the scores on (one variable) increases across cases, the scores on (the other variable) tend neither to increase nor to decrease. If *r* is negative, low scores on (one variable) tend to be associated with high scores on (the other variable), and high scores on (one variable) tend to be associated with low scores on (the other variable). A correlation of -1 indicates that as scores on (one variable) increase across cases, the scores on (the other variable) decrease precisely at a constant rate (Green & Salkind, 2008, p. 259).

Findings

Table 4 summarizes the paired-samples *t* test, sign tests and effect sizes for the CAST panic and anxiety group treatment on target behaviours. The p-values are one-tailed.

Affective and Somatic Symptoms of Anxiety (General Anxiety)

Normality and outliers. The differences in pre- and post SAS raw scores is normally distributed, D(33) = 0.08, p=.20, where the p-value is the lower bound of the true significance, n= 33. Outcomes from reviewing outliers were satisfactory (Fields, 2005, p. 76) and 1 case is missing.

Comparison of pre-posttest scores. A paired-samples *t* test was completed to assess whether participants in the panic and anxiety group showed a decrease in general anxiety after

Table 4

Summary of Paired-Samples t Test, Sign Tests, Effect Sizes and Power of Panic and Anxiety Group Treatment on Target Behaviours

Target Behaviours	Panic and Anxiety Group Treatment					
	n	Pre-*M* (SD) [Threshold of functioning]	Post-*M* (SD) [Threshold of functioning]	Test statistic	Effect size[b] (*d*)	Power[c] (δ)
Affective & somatic symptoms of anxiety (General anxiety)	33	47.91 (10.46) [Marked to severe anxiety]	42.33 (9.94) [Minimal to moderate anxiety]	*t*=3.34**	.58 (med)	.86
Anxiety sensitivity (Fear of anxiety related symptoms)	29	36.0 (15.39) [some]	29.17 (15.84) [A little to some]	*t*= 2.91**	.54 (med)	.75
Number of panic attacks/week	25	2.28 (2.99)	2.26 (3.27)	*z*=-.46 ns	.09 (none)	0
Panic attack intensity (on scale of 0-8)[d]	14	5.30 (1.46)	4.21 (1.78)	*t*= 1.90*	.51 (med)	.37
While alone, severity of avoidance	26	2.59 (.97) [avoid about half the time & rarely avoid]	2.37 (.86) [avoid about half the time & rarely avoid]	*t*= 2.06*	.40 (small-med)	.41
While accompanied, severity of avoidance	26	1.98 (.80) [rarely avoid]	1.62 (.52) [never avoid & rarely avoid]	*t*= 3.98***	.78 (large)	.95
Depression	22	15.32 (5.94) [severe to moderate]	12.57 (4.63) [moderate]	*z*=-3.02*	.64 (med-large)	.78
Frequency of certain fearful thoughts	32	2.4 (.71) [half the time & rarely occurs]	2.20 (.64) [half the time & rarely occurs]	*t*= 2.19*	.39 (small-med)	.49

Note. Standard deviations appear in parentheses beside mean. Threshold of functioning appear in parentheses below mean. [a] P-values are one-tailed. [b] Effect size, *d* (*d*=*t*/squareroot'n' or *d*=*z*/squareroot'n') were calculated, where "*d* values of .2, .5, and .8 regardless of sign are by convention, interpreted as small, medium and large effect sizes respectively" (Green & Salkind, 2005, p. 163) and the percentage of overlap is 85%, 67% and 53% respectively (Coolican, 2004, p. 385). "The percentage of overlap is the percentage area overlap of" the pre-treatment population and post-treatment population (Coolican, 2004, p. 385). [c] To calculate the level of power for a paired sample *t* test the δ (delta) statistic was used, δ= *d* * squareroot'n' (delta=effect size x squareroot'n') and then a δ table (table for power as a function δ and significance level) was consulted for the value for power (Coolican, 2004, pp. 387 &.663). [d] The panic attack intensity was described as a range from 0-8, where 0 was the least severe and 8 was the most severe. Those who reported experiencing zero panic attacks in the past seven days either left the panic intensity blank or wrote not applicable.

* $p < .05$, ** $p < .01$, *** $p < .001$., n.s. denotes not significant.

the intervention. Findings reveal a significant decrease in mean self-rated general anxiety experienced by participants (SAS raw scores) from before the group intervention (M=47.91, SD=10.46, SE=1.82) to after the group intervention (M=42.33, SD=9.94, SE=1.73), $t(32)= 3.34$, $p =.001$ (See Figure 2). On average the SAS raw scores before and after the intervention decreased by 5.58 (SD=9.60, SE=1.67) with a 95% confidence interval of -8.98 to -2.17. A medium effect size was observed ($d= .58$). These SAS raw scores then can be converted to a SAS anxiety index score and clinical interpretation. The average client gained from "marked to severe anxiety" before treatment to "minimal to moderate anxiety" after treatment.

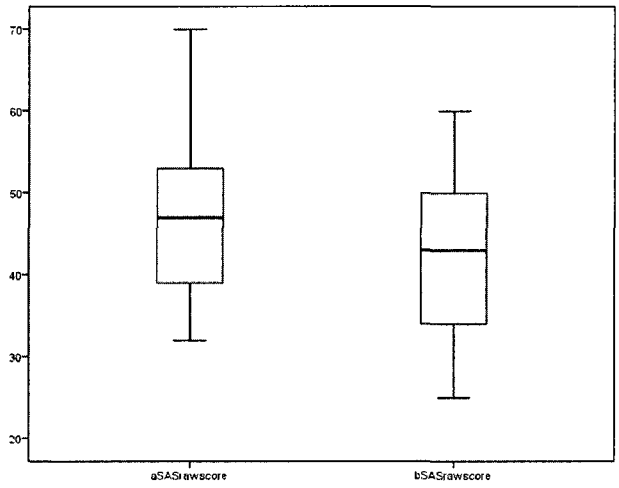

Figure 2. Distributions of self-rated anxiety experienced by participants before and after the intervention in terms of self-rated anxiety raw scores (aSASrawscore and bSASrawscore respectively).

For this variable, 17 of the 33 participants decreased in the SAS score after the intervention indicating a decrease in general anxiety after the intervention. There were 4 cases were the SAS score increased and 10 cases where SAS scores remained the same.

Anxiety Sensitivity (Fear of Anxiety Related Symptoms)

Normality and outliers. The differences in pre- and post ASI3 scores is significantly non-normal, $D(29) = 0.18$, $p =0.02$, n=29, despite this the paired samples *t*-test can be used, since

> with a moderate or larger sample size, the paired-samples *t* test may yield reasonably accurate p values even when the difference scores are not normally distributed in the population... a commonly accepted value for a moderate sample size is 30 pairs of scores (Green & Salkind, 2005, p. 162).

Results from evaluating outliers were satisfactory (Fields, 2005, p. 76) and 5 cases are missing.

Comparison of pre-posttest scores. A paired-samples *t* test was conducted to evaluate whether participants in the panic and anxiety group would have decreased in anxiety sensitivity after the intervention. The results indicate a significant decrease in mean anxiety sensitivity (ASI3) from before the group intervention (M=36.0, SD=15.39, SE=2.86) to after the group intervention (M=29.17, SD=15.84, SE=2.94), $t(28)= 2.91$, $p=.004$. The same statistical conclusion was reached using the appropriate non-parametric test, (i.e. sign test). On average the ASI3 scores before and after the intervention decreased by 6.86 (SD=12.7) with a 95% confidence interval of -11.69 to -2.03. A medium effect size was observed ($d=.54$).

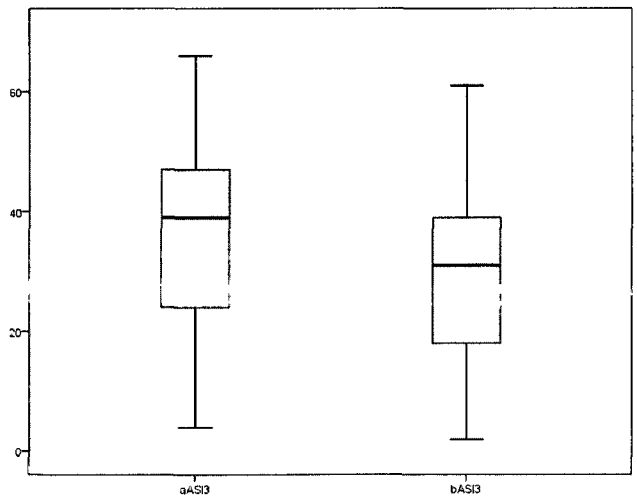

Figure 3. Distributions of anxiety sensitivity experienced by participants before and after the intervention in terms of ASI3 scores (aASI3 and bASI3 respectively).

Descriptive analysis. ASI3 scores before the intervention ranged from 4 to 66, with the median at 39, the 25th percentile at 24 and 75th percentile at 47 while ASI3 scores after the intervention ranged from 2 to 61, with median 31, the 25th percentile at 18 and 75th percentile at 39 (See Figure 3).

Descriptives summary. A translation of this, is that from pre to post-intervention the maximum recorded ASI3 scores decreased by a score of 5.0 on a scale of 0 to 72 (inclusive) from a score of 66.0 to a score of 61.0.

Number of Panic Attacks Experienced Per Week

Normality and outliers. The distribution of differences in pre- and post-number of panic attacks is significantly non-normal, $D(25) = 0.24$, $p < .01$, n=25. There is one outlier with an extremely low z score, z=-3.91, which was identified as a significant outlier since the absolute value was greater than 3.29, this significant outlier was removed.

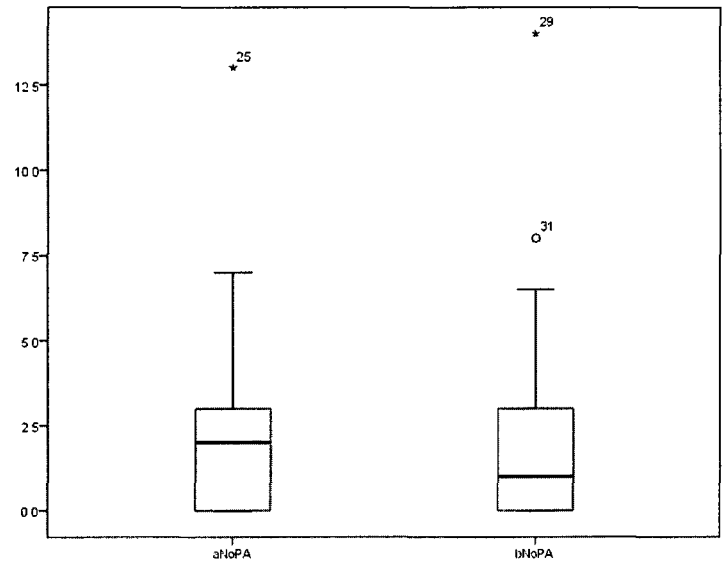

Figure 4. Distributions of the number of panic attacks experienced in the previous 7 days (NoPA) by participants before and after the intervention (aNoPA and bNoPA respectively).

Comparison of pre-posttest scores. A Sign test was performed to assess whether participants in the panic and anxiety group showed a decrease in the number of panic attacks experienced after the group. The panic attack number recorded is to the number of panic attacks experienced in the previous 7 days.

The sign test indicated no significant change in the number of panic attacks experienced by participants from before (M=2.28, SD=2.99) to after the intervention group (M=2.26,

SD=3.27), z=-.46, p=1.00. On average the number of panic before and after the intervention decreased by .02 (SD=2.87) with a 95% confidence interval of -1.21 to 1.17. No effect size was observed (d= .007). Eight of the 25 participants decreased in the number of panic attacks after the intervention, 7 participants increased and 10 remained the same.

As defined by Telch et al. (1993) and Barlow et al. (1989) panic-free clients equates to individuals experiencing zero panic attacks. The number of individuals reporting being panic-free the week before treatment was 10 clients (40%) and at the end of treatment this remained the same at 10 clients (40%). Many of the participants who reported as panic-free for the week before treatment often reported the same status at the end of treatment.

Descriptive analysis. As noted in Figure 4, the pre-intervention number of panic attack experienced ranged from 0 to 13 (median=2) and the most commonly reported number was 0. The post-intervention average number of panic attacks experience ranged from 0 to 14 (median=1) with the most commonly reported number as 0. It is notable that the median decreased by one panic attack during the pre to post-intervention. The distribution for panic attacks reported before the intervention had the 25th percentile at 0 and 75th percentile at 3 and this was the same after the intervention.

Descriptives summary. A translation of this is that after the intervention, for the lowest scores, 50% of the 25 participants had a smaller range of panic attacks experienced per week, 0 to 1 panic attack, compared to before the group, for the lowest scores, 50% of the 25 participants experience a range of 0 to 2 panic attacks.

Panic Attack Intensity

Normality and outliers. The differences in pre- and post intensity score of panic attacks is normally distributed, D(14) = 0.15, p= .20, where the p-value is the lower bound of the true

significance, n=14. Twenty cases were recorded as not applicable or were missing from this variable. Deductions from reviewing outliers were satisfactory (Fields, 2005, p. 76).

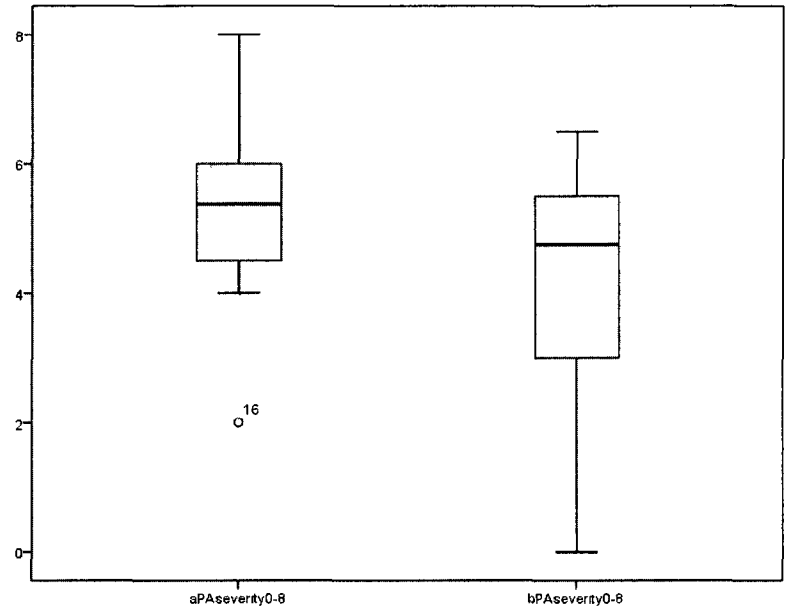

Figure 5. Distributions of intensity levels of panic attacks experienced by participants before and after the intervention on a scale of 1 to 8 (aPAseverity0-8 and bPAseverity0-8 respectively).

Comparison of pre-posttest scores. A paired samples *t* test was carried out to determine whether participants in the panic and anxiety group exhibited a decrease in the intensity of their panic attacks after the intervention. The intensity was described as a range from 0-8, where 0 was the least severe and 8 was the most severe. The pre-intervention mean panic attack intensity scores (M=5.30, SD=1.46, SE= .39) showed a significant decrease post-intervention (M=4.21, SD=1.78, SE=.48), $t(13)= 1.90$, $p = .04$). On average the severity of panic attacks before and after the intervention decreased by a score of 1.09 (SD=2.14, SE=.57) with a 95% confidence interval of -2.33 to .15. A medium effect size was observed (d=.51).

Descriptive analysis. As demonstrated in Figure 5, panic attack intensity before the intervention ranged from 2.0 to 8.0, with the median at 5.38, the 25th percentile at 4.5 and 75th

percentile at 6.0 while scores after the intervention ranged from 0 to 6.5, with median 4.75, the 25th percentile at 3.0 and 75th percentile at 5.5.

Descriptives summary. A translation of this is that from pre to post-intervention the maximum recorded intensity of panic attacks decreased by 1.5. The intensity of panic attacks decreased from 8 to 6.5. At the same time, the range of lower panic attack intensity scores before the intervention for 25% of the 14 participants had a range of 2 to 4.5 decreasing in intensity level scores after the intervention for 25% of the 14 participants which was 0 to 3.0. Before treatment there is one case with a panic attack severity score of 2, this would indicate that 93% of the 14 participants before the group (range of 4.0 to 8.0 panic attack intensity scores) would not have experienced the lower 0 to 3.0 panic attack intensity scores as the 25% of the 14 participants with the lowest scores after the group did.

There were 9 cases of 15 were the panic attack intensity score decreased and 6 cases where the score increased and zero ties in scores. The range of lower panic attack severity scores before the intervention were 43% of the 15 participants recorded a range of 4.0 to 5.38 in panic attack severity levels compared to after the intervention for 50% of the 15 was 0 to 4.75 (if the one case with a panic attack severity score of 2 before the group is excluded in terms of pre and post scores).

While Alone, Severity of Avoidance Behaviour of Certain Common Situations

Normality and outliers. The differences in pre- and post-Mobility Inventory for Agoraphobia scores while alone is normally distributed, $D(26) = .10$, $p = .20$, where the p-value is the lower bound of the true significance, n=26. Outcomes from analyzing outliers were satisfactory (Fields, 2005, p. 76) and 8 cases are missing from this variable.

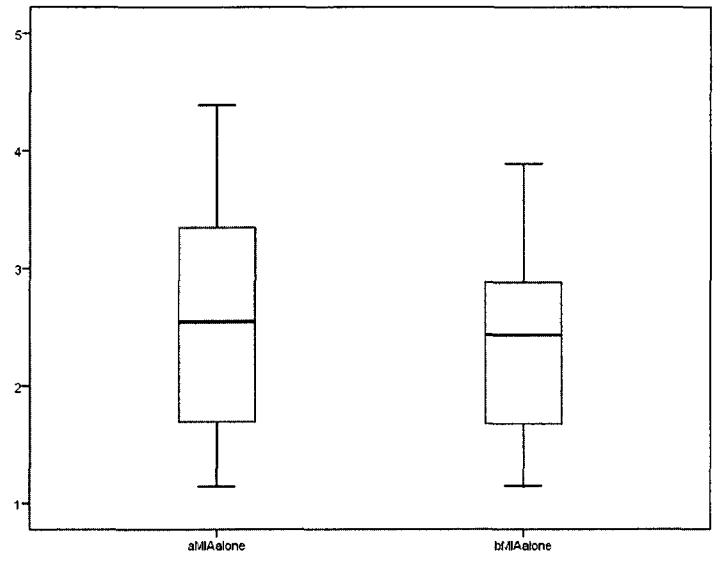

Figure 6. Distributions of severity of avoidance behaviour of common situations while alone as experienced by participants before and after the intervention in terms of MIA alone scores (a MIA alone and b MIA alone respectively).

Comparison of pre-posttest scores. A paired samples *t* test was performed to appraise whether participants in the panic and anxiety group experienced a decrease in the severity of avoidance behaviour of common situations while alone after the intervention using the MIA alone scale. The findings suggest a significant decrease in mean severity of avoidance behaviour of common situations while alone from before the group intervention (M=2.59, SD=.97, SE=.19) to after the group intervention (M=2.37, SD=.86, SE=.17), $t(25)= 2.06$, $p =.025$. The average client gained from between "avoid about half the time and rarely avoid" functioning pre-treatment to a lower version of this in-between state after treatment. The average client is closer to "rarely avoid" functioning post-treatment. On average the severity of avoidance behaviour of common situations while alone before and after the intervention decreased by a score of .22 (SD=.55, SE=.11) with a 95% confidence interval of -.44 to .00. A small to medium effect size was observed (d=.40).

Descriptive analysis. As exhibited in Figure 6, MIA alone scores before the intervention ranged from 1.14 to 4.39, the 25th percentile at 1.57 and 75th percentile at 3.20 while MIA alone scores after the intervention ranged from 1.15 to 3.89, the 25th percentile at 1.57 and 75th percentile at 2.99.

Descriptives summary. A translation of this is that from pre to post-intervention the maximum recorded MIA alone scores decreased by a score of .50 on a scale of 1 to 5 (inclusive) from a score of 4.39 to a score of 3.89. This is a gain from "avoid most of the time" to "avoid half the time". The MIA alone score medians before (2.55) and after (2.43) the intervention are very similar. Clients in the lower 50% of MIA alone scores before the intervention (1.14 to 2.55) had very similar range to the clients in the lower 50% of MIA alone scores after the intervention (1.15 to 2.43).

While Accompanied, Severity of Avoidance Behaviour of Certain Common Situations

Normality and outliers. The differences in pre- and post mobility inventory scores while accompanied is normally distributed, $D(26) = 0.17$, $p = .07$, $n=26$. Conclusions from examining outliers were satisfactory (Fields, 2005, p. 76) and 8 cases are missing from this variable.

Comparison of pre-posttest scores. A paired samples *t* test was conducted to evaluate whether participants in the panic and anxiety group display a decrease in the severity of avoidance behaviour of common situations (while accompanied) after the intervention using the MIA accompanied scale. The results reveal a significant decrease in mean severity of avoidance behaviour while accompanied (MIA accomp) from before the group intervention (M=1.98, SD=.80, SE= .16) to after the group intervention (M=1.62, SD=.52, SE=.10), $t(25) = 3.98$, $p=.0005$. The average client gained from before treatment "rarely avoid" functioning while accompanied to about half way between "never avoid" and "rarely avoid" after treatment. On

average the severity of avoidance behaviour (while accompanied) before and after the intervention decreased by a score of .36 (SD=.46, SE=.09) with a 95% confidence interval of -.55 to -.17. A large effect size was observed (d=.78).

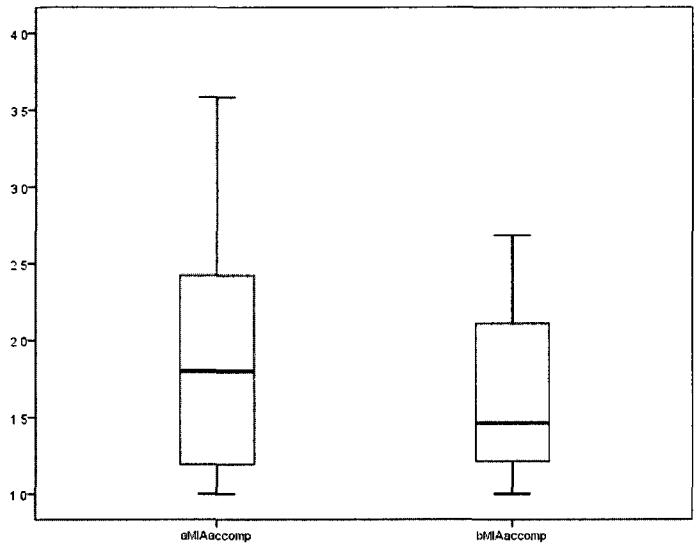

Figure 7. Distributions of severity of avoidance behaviour of common situations while accompanied as experienced by participants before and after the intervention in terms of MIA accompanied scores (a MIA accomp and b MIA accomp respectively).

Descriptive analysis. As illustrated in Figure 7, MIA accomp scores before the intervention ranged from 1 to 3.58, with the median at 1.80, the 25th percentile at 1.19 and 75th percentile at 2.42 while MIA accomp scores after the intervention ranged from 1 to 2.68, with median 1.46, the 25th percentile at 1.21 and 75th percentile at 2.11.

Descriptives summary. A translation of this is that from pre to post-intervention the maximum recorded MIA accomp scores decreased by almost a whole point (0.90) on a scale of 1 to 5 (inclusive) from a score of 3.58 to a score of 2.68. The medians between before and after the group treatment decreased by .34 on a scale of 1 to 5 (inclusive).

Severity of Depressive Symptoms

Normality and outliers. The differences in pre- and post-QIDS scores distribution is non-normal, D(22) = 0.20, p=.02, n=22. Results from reviewing outliers were satisfactory (Fields, 2005, p. 76) and 12 cases are missing from this variable.

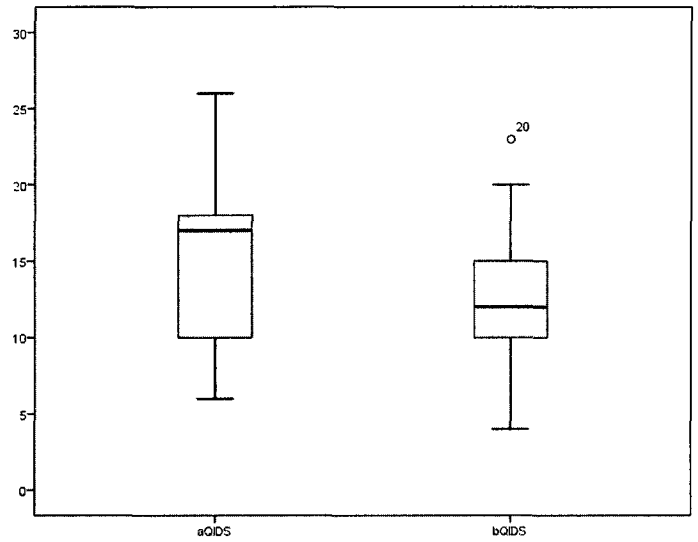

Figure 8. Distributions of depressive symptoms experienced by participants before and after the intervention in terms of QIDS scores (aQIDS and bQIDS respectively).

Comparison of pre-posttest scores. A Sign test was conducted to evaluate whether participants in the panic and anxiety group exhibited a decrease in the depressive symptoms after the group using the QIDS scale. The sign test indicated a significant decrease in depressive symptoms experienced by participants (QIDS) from before (M=15.32, SD=5.94, SE=1.27), to after the intervention group (M=12.57, SD=4.63, SE=.99) z=-3.02, p=0.01. The average client gained from a borderline of "severe to moderate" depressive symptoms to "moderate" depressive symptoms. On average the depressive symptoms before and after the intervention decreased by a score of 2.75 on a scale of 0-27 (SD=3.34, SE=.71) with a 95% confidence interval of -4.23 to -1.27. Sixteen of the 22 participants decreased in depressive symptoms after the intervention, 5 participants increased and 1 remained the same. A large effect size was observed (d=.82).

Descriptive analysis. As displayed in Figure 8, the pre-intervention QIDS score ranged from 6.0 to 26.0 with a median of 17.0. The post-intervention level of NoPA ranged from 4.0 to 23.0 with a median of 12.0. It is notable that from before and after the intervention the median decreased by a score of 5.0. The distribution for QIDS scores reported before the intervention had the 25th percentile at 10.0 and 75th percentile at 18.0 while QIDS scores reported after the intervention had the 25th percentile at 10.0 and 75th percentile at 15.00.

Descriptives summary. From before to after intervention the maximum recorded QIDS score decreased from by a score of 3.0 from "very severe" depressive symptoms (26.0) to lower version of this category (23.0). In addition after the intervention, clients with the lower 50% of the QIDS scores of the 22 participants had a smaller range of depressive symptoms, reflecting depressive symptoms of "none to moderate" (4.0 to 12.0) compared to before the group where the clients in the lower 50% of the QIDS scores of the 22 participants experienced depressive symptoms of "none to severe" (6.0 to 17.0).

Frequency of Certain Fearful Thoughts

Normality and outliers. The differences in pre- and post-scores of the frequency of certain thoughts related to anxiety disorders that can occur (ACQ) is normally distributed, D(32) = 0.13, p= .18, n=32. Findings from analyzing outliers were satisfactory (Fields, 2005, p. 76) and 2 cases are missing from this variable.

Comparison of pre-posttest scores. A paired samples t test was carried out to establish whether participants in the panic and anxiety group would experience a decrease in the frequency of certain thoughts related to anxiety disorders after the intervention using the ACQ scale. The outcome indicates a significant decrease in mean frequency of certain thoughts related to anxiety disorders in terms of ACQ scores from before the group intervention (M=2.4, SD=.71, SE=.13)

to after the group intervention (M=2.20, SD=.64, SE=.11), $t(31)= 2.19$, $p = .02$. The average client gained from "thought occurs half the time when I am nervous and thought rarely occurs" to a lower bracket of this in-between state. On average the frequency of certain thoughts related to anxiety disorders in terms of ACQ scores decreased by a score of .21 (SD=.53, SE=.09) with a 95% confidence interval of -.40 to -.02. A small to medium effect size was observed (d=.39).

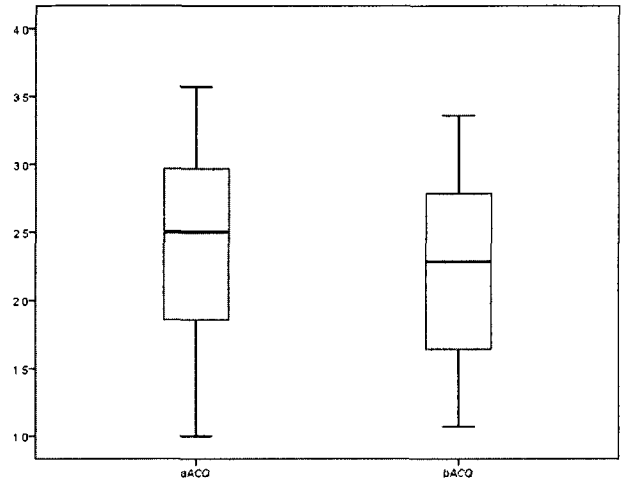

Figure 9. Distributions of the frequency of certain fearful thoughts related to anxiety disorders for participants before and after the intervention in terms of ACQ scores (aACQ and bACQ respectively).

Descriptive analysis. As illustrated in Figure 9, there is quite a bit of overlap between ACQ scores before the intervention ranged from 1.0 to 3.57 (with the median at 2.5, the 25th percentile at 1.86 and 75th percentile at 2.97) and ACQ scores after the intervention ranged from 1.07 to 3.36 (with median 2.29, the 25th percentile at 1.64 and 75th percentile at 2.79).

Descriptives summary. A translation of this is that from before and after intervention the maximum recorded frequency of certain thoughts related to anxiety disorders in terms of ACQ decreased from a score of 3.57 to a score of 3.36 and the medians decreased by a score of .21 from 2.5 to 2.29 on a scale of 1 to 5 (inclusive).

Cohort Groups

Appendix M illustrates for each different cohort that attended the panic and anxiety group (from 2006 to 2009), mean pretest and posttest scores of the eight target behaviours. The analysis of each cohort group was conducted because data aggregation of all cohort groups can obscure important differences among cohorts groups. The individual cohort groups (See Appendix M) strongly corroborates the statistical results of the amalgamated cohort groups (See Table 4), where improved functioning in seven of the eight target behaviours related to anxiety from before to after the group were detected. The groups were not a panacea (nor should it be consider as such) and individual increases in some cohorts were observed. There are some exceptions where certain cohorts have a mean pretest score that increases after the group which are: cohort 3 for while alone, severity of avoidance (n=7); cohort 4 for while alone, severity of avoidance (n=1) and while accompanied, severity of avoidance (n=1); cohort 5 for general anxiety (SAS raw score) (n=2), panic attack intensity (n=1) and frequency of certain fearful thoughts (ACQ) (n=2); cohort 7 for affective and somatic symptoms of anxiety (SAS raw score) (n=2), panic attack intensity (n=1), while alone, severity of avoidance (n=1) and while accompanied, severity of avoidance (n=1); Cohort 9 for anxiety sensitivity, ASI3 (n=4). The cohort groups that had a total of 9 sessions rather than 10 sessions may have reduced the chances of this study finding significance decreases in behaviours related to anxiety as these clients attended one less session. These cohort groups (Cohort 1 and 2) despite having one less session than the other cohorts also showed decreases in behaviours related to anxiety (See Appendix M). Overall the individual cohort groups (See Appendix M) reiterates the statistical results of the amalgamated cohort groups (See Table 4) of observing increased functioning for seven of the eight target behaviours

related to anxiety from before to after the group. Appendix N presents the sample size for each of the nine panic and anxiety group cohorts for the eight target behaviours.

Repeated Measures ANOVAs: Client Characteristics and Target Behaviours

Repeated Measures ANOVAs were performed to evaluate client characteristics (education, attendance, age and employment) as predictors in changes in client functioning for eight target behaviours (See Appendix P). Scores were normally distributed for seven of the eight target behaviours for the within-subjects factor time (general anxiety, anxiety sensitivity, panic attack intensity, while alone severity of avoidance, while accompanied severity of avoidance, depression and frequency of certain fearful thoughts) (See Appendix O). The scores for the number of panic attacks are significantly non-normal so the results should be interpreted cautiously (See Appendix O). For the between-subjects factor attendance, the median of 90.25% attendance was used as the cutoff to split the sample into two groups of relatively equal size. For the between-subjects factor age, the median of 44.5 years of age was used as the cutoff to produce relatively equal sized groups for comparison. For the between-subjects factor employment, the groups part-time and full-time employed were grouped together into the one category, employed and compared to the other category group, not in the labour force.

There were a few significant interactions observed from the RMANOVA results. The RMANOVA results for education as a function of time showed no significant findings for the Education X Time interaction effect or Education main effect (See Appendix P, Table 5). Nor did the RMANOVA results for age as a function of time reveal any significant Age X Time interaction effect or Age main effects (see Appendix P, Table 7). There were two significant interactions observed in the RMANOVA analysis for attendance as a function of time (Appendix P, Table 6) and one significant interaction for employment as a function of time. The Attendance

X Time interaction effect was significant for the two measures, severity of avoidance of common situations while alone, $F(1, 24) = 6.42$, $p = .02$, and, severity of common situation while accompanied, $F(1, 24) = 9.37$, $p = .005$, (MIA alone scores and MIA accompanied scores). No other significant Attendance X Time interaction effects or Attendance main effects were found. The RMANOVA results for employment as a function of time exhibited significant Employment X Time interaction effect for one measure, the of severity of avoidance of common situations while accompanied, $F(1, 23) = 4.29$, $p = .05$, (MIA accompanied scores) (See Appendix P, Table 8). The Employment main effect was established to be significant for the four target behaviours: general anxiety, $F(1, 30) = 4.86$, $p = .04$, anxiety sensitivity, $F(1, 16) = 5.32$, $p = .03$, severity of avoidance of common situations while accompanied, $F(1, 23) = 4.29$, $p = .05$ and depression $F(1, 20) = 7.32$, $p = .01$.

The average client who had 90.5% attendance or less showed a significantly greater gain in functioning from before and after treatment compared to the average client who attended the group greater than 90.5% of the time for the two target behaviours while alone and while accompanied severity of avoidance of common situations. It was observed that the average client who was not in the labour force had a significantly greater gain in functioning compared to the average client who was employed in the labour force for the target behaviour while accompanied, severity of avoidance. For further discussion see the pretest-posttests discussion section, RMANOVAs and correlations.

Correlations: Changes in Posttest-Pretest (difference scores) and Attendance

A series of analyzes was conducted to examine the impact of attendance on program outcomes. First, difference scores were calculated for each outcome measure where pretest scores were subtracted from posttest scores (i.e. post MIA score alone minus pre MIA alone, 2-3

= -1). Secondly a series of correlations were conducted between these difference scores and attendance.

The correlation between the percentage of attendance by clients and the difference scores for the following target behaviours were significant:

- While alone, severity of avoidance of common situations (MIA alone scores), $r(24) = .43$, $p = .03$
- While accompanied, severity of avoidance of common situations (MIA accompanied scores), $r(24) = .55$, $p = .004$.

An increase in attendance is associated with an increase in difference scores. Higher scores means a lower level of functioning so increasing in difference scores equates to a decrease in functioning in target behaviours from before to after treatment. For further discussion see the pretest-posttests discussion section, RMANOVAs and correlations. The correlations between difference scores and percentage of attendance for the following target behaviours were non-significant:

- General anxiety (SAS raw scores), $r(31)= .15$, $p = .40$
- Anxiety sensitivity (ASI3), $r(27) = .34$, $p = .07$
- Number of panic attacks experienced in a week (MIA), $r(23)= -.36$, $p =.87$
- Intensity of panic attacks (MIA), $r(13) = .14$, $p = .63$
- Depression (QIDS), $r(20) = .28$, $p = .21$
- Frequency of fearful thoughts (ACQ), $r(30) = .11$, $p = .55$

Overall the majority of clients (with different attendance levels) appear to have benefited from the intervention in the majority of outcome measures.

CHAPTER V: INTERVIEWS METHODOLOGY & FINDINGS

Research Question

The purpose of the post-intervention interviews with participants of the panic and anxiety group was to illuminate and address the question: What is the client experience of the group process, content, and outcomes of the panic and anxiety group? These findings extend the pretest-posttest analyzes by describing the particular aspects of the group experience that were useful or not useful for clients.

Method for Interviews

A cross-sectional design was used for the post-intervention interviews. These one-on-one interviews were approximately one hour and fifteen minutes in length and were conducted at the CAST office. The interviews were held within two weeks of the last panic and anxiety group session attended by each interviewee. The interviews have differences in procedures and ethical considerations compared to the pre-post design in this study (See Table 1). For the interviews, the researcher had face-to-face contact with the participants. This was not the case for the previously described pre-post design, which did not involve any active data collection nor did it involve any informed consent since the data was previously collected by CAST facilitators. Of the 34 clients in the pre-post design sample (fall 2006 to spring 2009), two were interviewees. The last interviewee was not included in the pre-post design data analysis since the pre-post data was not yet available (attended group after spring 2009).

The interviewer[14], who is also the researcher, discussed with the group facilitators when it was best to approach and recruit potential interviewees. Interviewees were introduced to the interviewer at either their fourth or fifth group session. In the interviewee's introduction, the

[14] The term "interviewer" will be used for the interviews section rather than "researcher" to facilitate easier differentiation from the pretest-posttest section and interview section while reading.

clients in the panic and anxiety group participants were provided the purpose of the study, given information about the interviewer, invited to participate in interviews to share her or his experiences in the group and told that their participation was completely confidential and voluntary. If a participant chose not to participate, she or he continued the panic and anxiety group intervention as scheduled. An information sheet with the interviewer's contact information was handed out to group members (See Appendix I).

In cases where the interviewer was unable to personally introduce herself (due to timing conflicts) at a group session, facilitators: (1) invited group members to participate in an interview to speak about their experiences in the group, (2) gave them an information sheet (See Appendix I), (3) informed group members they could call the interviewer with any questions and (4) informed group members they could arrange a face-to face meeting with the interviewer so they could meet the interviewer first before deciding whether or not they would like to participate in an interview.

At the start of each interview, participants were asked to re-read the information sheet and informed consent form (See Appendix I) and if they agreed to be in the study they were asked to sign two copies of the informed consent form. The participant kept one copy of the information sheet and informed consent form for her or his own records and the interviewer kept the other copy of the signed informed consent form in a secured locked filing cabinet. Interviewees were asked for permission to audio-record their interview and all interviewees gave their permission. Group members were informed that at any time she or he could decline to answer any questions, stop the interview at any time rescind any information from the interview she or he has given and/or withdraw from the study at any time.

The interviewer has human service training and experience working in the human service industry with individuals of diverse ages, cultures and backgrounds. In addition, the interviewer had successfully completed the Interagency Advisory Panel tutorial for the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*. The interviewer was consciously mindful of verbal and non-verbal body language throughout the interview to attend to possible signs of discomfort from interviewees. If any signs of discomfort from the interviewee arose, the interviewer asked the participant if she or he would like to take a break or discontinue the interview. After the interview, interviewees were provided a list of local supports and counselling referrals (See Appendix L).

All confidential material and data has been and will be kept on a password-protected computer or stored in a secure, locked cabinet and will be destroyed after seven years. Research data collected by Northern Health Authority's Community Acute Stabilization Team will stay with the agency.

Interview Questions

The interview guideline was semi-structured (See Appendix J). The semi-structured interview: (1) incorporates suggestions from CAST clinicians, fellow colleagues, supervisors, professors and committee members (from different disciplines such as, social work, counselling, psychology and nursing) and (2) includes questions applicable to this study from Patton's (2002) example of standardized open-ended interviews (pp. 422-427). The interview guide focused on four areas: (1) what brought the individual to the group, (2) how the individual felt about the group, (3) what he or she got from the group, and, (4) demographic information about the individual. The questions inquired about the individual's personal expectations, impacts, process,

satisfaction with the group, likes, dislikes and opinions of the strengths and weaknesses of the group and suggestions for the group.

The interview protocol was piloted with a colleague in the social work field, who was knowledgeable about anxiety disorders, to test the appropriateness of the questions, ordering of the questions, timing of the interview and other factors related to improving the interview guideline. After this the interview guideline was further adapted before it was used with interviewees.

Sample Selection for Interviews

The sample was composed of three interviewees who participated in the CAST panic and anxiety groups from 2008-2009. Refer to the methods section for further detail on how the interviewees were recruited. Two women and one man were interviewed. Two interviewees were between 34-40 years old and one interviewee was slightly older (45 years old). All three interviewees attended most of the sessions, one interviewee attended all ten sessions, one interviewee attended 8 sessions and one interviewee attended 6 sessions. Two interviewees were of non-European descent[15] and one interviewee was of European descent. Two interviewees were employed full-time and one interviewee was supported through disability benefits. All three interviewees had attended psycho-educational and/or support groups previous to the panic and anxiety group.

Data Analysis

The qualitative data analysis method used in this study, content analysis was informed by R. York (2009) and Corbin and Strauss (2008) that are both a modified form of grounded theory. As the interviewer and researcher, I interviewed participants and then transcribed the interviews

[15] The term non-European descent was used to maintain confidentiality because the interviewees' cultural backgrounds were highly identifiable.

verbatim from audio-recordings and analyzed the data. This process ensured that I was immersed in the data. Each transcript was read and then analyzed in chronological order. Thoughts and ideas relating to the interview content and coding were placed in memos (Corbin & Strauss, 2008). During the analysis process, codes were changed to better embody what the participants expressed along with the similarities and contrasts among the interviews.

The content analysis used to analyze the interviews was a method outlined by R. York (2009) and includes the following steps:

> (1) determine the conceptual framework that you will use for examining your qualitative data...,
> (2) engage in a bracketing exercise by listing your own ideas about the study question...,
> (3) undertake the first level of coding (usually called open coding) which requires that you place a word or phrase that captures the basic idea of each individual statement...,
> (4) undertake the second level of coding by determining the major themes that combine many of these statements....,
> (5) engage in enumeration by counting the number of comments made on a given theme and the number of persons who mentioned this theme...,
> (6) engage in the third level of coding by examining relationships between messages or variables...,
> (7) test for saturation, or data adequacy....,
> (8) engage in a credibility assessment..., and
> (9) prepare a summary of your report (pp. 140-144).

For step one, clarifying a conceptual framework, an individualistic-reformist and reflexive-therapeutic lens was used when analyzing the interview data (Refer to the Introduction section, Epistemological framework, worldviews and assumptions on page 2 for more detail). For step two, bracketing helps identify the researcher's "preconceived notions about the research question" (R. York, 2009, p. 149). I consistently referred back to these thoughts to help ensure that my analysis of the interviews was not slanted by them and accurately reflected what the interviewees were saying. For step three, first level coding closely reflected participant's comments and sometimes in vivo coding was used. The codes were written next to its

corresponding statement in the transcript. For instance the code "journaling" was used for the statement "*journaling helped a little bit to write down and it just helps me be aware of what makes me anxious*" *(interviewee #2)* and the comment, "*basically I just put down what happened to me in the week and that way I can discuss it and it would remind me" (interviewee #3).* While the code "cognitive restructuring" was used for the statements, "*Like maybe you're thinking, I'm going to die, like I'm going to have a heart attack. Well no you're not having a heart attack you're feeling stressed but you're not physically dying like you can.*" For step four, the second level of coding integrated similarities and contrasts among statements into themes, which were then colour coded. For instance, the three comments above with the first level codes, "journaling" and "cognitive restructuring" were categorized under the theme "coping strategies" and coded in the same colour to represent them. During the process of first-level coding, second-level coding was at times conducted simultaneously if higher-level concepts or themes emerged and this process occurred organically.

In step five, enumeration was used to demonstrate the prevalence of different codes. For enumeration, the themes in common were tallied in a table but I realized in the table some of the differences between interviews were not captured. For example all three interviewees had the theme "coping strategies" in common, however, the different type of "coping strategies" utilized by different interviewees were not captured. To address this issue, subthemes were created by directly using first-level codes or by combining first-level codes that were categorized under superordinate themes. The subthemes were created with the same framework as described in the second level of coding.

In the sixth step of content analysis, third-level coding, the process of finding connections among the themes was conducted. Again, this process was organic. During this process of

coding, connections and ideas among the themes emerged which I jotted down in notes. To evaluate the relationships among the themes I re-read my notes throughout the process and on paper drew ideas and themes in bubbles with lines representing the connection and relationships among them. Discussion with colleagues and supervisors helped to develop these ideas.

For step seven, test for saturation, unfortunately data saturation could not be reached due to the small sample size of this study. Although this is a small sample this information is valuable in supplementing the pre-post design.

Credibility of the data analysis, in step eight was assessed in various ways. After coding several pages of the first interview it was reviewed by the researcher's thesis supervisor who is experienced in qualitative data analysis who agreed with the coding. Member checking is another validity check that was used to ask: "does the analysis make sense to participants, and can they see how the overall analysis might be as you say it is?" (Kirby, Greaves & Reid, 2006, p. 241). The interpretation of the information into themes were brought back to participants to review and evaluate, to confirm whether the synthesized data was an accurate depiction of what he or she said and provided the opportunity to remove, add or clarify any information they felt was appropriate. This was done by sending the interpretations to participants along with a letter detailing the purpose, intent and involvement of member checking (See Appendix K for a sample member checking invitation).

All three interviewees agreed the interview findings accurately reflected what they had said about the panic and anxiety group. Two interviewees found no need for any changes, additions or removals to the interview findings. One interviewee had additional information to add to the interview findings which were: additional emphasis on the benefit of having two facilitators, additional information about how the facilitators acted as supports for clients,

elaborating on a suggestion to regularly practice relaxation in group session, and information taking into account attrition for ideal class sizes.

The final step for content analysis, step nine was to prepare a summary of the respondents' comments. This can be found in the interview findings section, discussion section and the summary at the end of this thesis.

Conventional paradigms discuss rigor, internal validity, external validity, reliability and objectivity. Lincoln & Guba (2007) discuss four criteria for trustworthiness (counterpart for rigor) that "parallel those of the conventional paradigm" (p. 18) which are: (1) credibility (counterpart for internal validity), (2) transferability (counterpart for external validity), (3) dependability (counterpart for reliability) and, (4) confirmability (counterpart for objectivity).

The criterion for credibility (counterpart for internal validity to find the truth value aspect or plausibility for the findings) was addressed in six ways (prolonged engagement, persistent observation, triangulation, peer debriefing, negative case analysis and member checking). First, to address prolonged engagement with the phenomenon at study the researcher contacted and interviewed interviewees, transcribed the interviews and re-read the transcripts and analyzed the data rather than having someone else carry this out. The researcher also participated in a research practicum study at the Community Acute Stabilization Team. Second, persistent observation was applied by the researcher. The researcher observed interviewees for body language before, during and after interviews that were approximately an hour and fifteen minutes in length. In addition during the interviews for the interviewer (who was also the researcher) to better listen to and observe interviewees without distractions from taking notes the interviews were audio-recorded with the permission of the interviewee. Third, triangulation was employed. Different sources were used by interviewing participants from different panic and anxiety groups.

Furthermore, to employ triangulation different methods and perspectives were utilized through combining the post-intervention interviews (a qualitative perspective) and pretest-posttest data (a quantitative perspective). Fourth, to address peer debriefing, the researcher discussed her hypotheses, method and problem solving with disinterested fellow professional peers (in different disciplines in addition to social work such as psychology, education and natural resources and environmental studies) who did not have a stake in the study. Fifth, to engage in negative case analysis, the researcher actively looked for negative examples or contradictory information to incorporate into the findings to better ensure nothing was missed. Last, to practice member checks, the researcher contacted interviewees to confirm that the interview findings accurately reflected what they said about the panic and anxiety group.

The criterion for transferability (counterpart for external validity to find the applicability or contextual relevance) was addressed by "collecting thick descriptive data that will permit comparison of this context to other possible contexts to which transfer might be contemplated" (Guba, 1981, p.86), where the researcher encouraged interviewees to elaborate on their responses. Where upon more context to the interviewees' initial responses were given in these more descriptive responses. This process allowed for more thick description in the interview findings section so it could be compared to other potential contexts.

The criterion of dependability (counterpart for reliability to find the aspect of consistency and stability) was addressed by the use of triangulation, establishing an audit trail and conducting a dependability audit. This study used different and overlapping methods by employing both a qualitative method, the post-intervention interviews and a quantitative method, pretest-posttest data. The researcher established an audit trail by extensively documenting the research process (for example, journaling), documenting the analysis (for example, first-level and second-level

coding), documenting the findings (for example, this thesis) and documenting the interview data collected (Guba, 1981). A dependability audit was conducted by the researcher's thesis co-supervisors by looking at the audit trail. The researcher's thesis defense committee and an external auditor did the same but examined the research process in general to determine if methods were within generally accepted practice and did not audit the actual interview data collected.

The criterion of confirmability (similar to objectivity to find neutrality and investigator-free findings) was attended to by using triangulation, the researcher practicing reflexivity and a confirmability audit. As mentioned previously in the discussion of credibility and dependability, the use of multiple methods in this study, a form of triangulation, gives a blend of different viewpoints, a quantitative viewpoint by using pretest-posttests data and a qualitative viewpoint by using post-intervention interviews. The criterion of confirmability was also addressed by the researcher practicing reflexivity. Reflexive practice involves the researcher critically thinking about and querying the researcher's (and the research) epistemological framework, process, analysis and findings (Patton, 2002, pp. 64-66 & 495) and Ruby (1980) describes practicing reflexivity as to, "intentionally reveal to his (or her) audience the underlying epistemological assumptions which cause him (or herself) to formulate a set of questions in a particular way, and finally present his (or her) findings in a particular way" (p.157). The researcher used reflexive practice by presenting the underlying epistemological framework to the reader, by actively challenging her preconceived notions by the use of bracketing, by recording her introspections throughout the research process and by discussing her epistemological framework, ideas, introspections, findings and the research process with peers (in different disciplines, in addition to social work such as psychology, education and natural resources and environmental studies),

thesis supervisors and committee members while retaining client confidentiality. This helped the researcher to explore and be open to a variety of perspectives and to increase her awareness of the underlying epistemological framework used in this study and any changes in her perspectives throughout the research process. In addition to address confirmability, a confirmability audit was conducted by the researcher's supervisor; however this was not done by an external auditor.

To maintain confidentiality, all identifying data was removed. Interviewees were referred to as interviewee #1, #2 and #3 in no particular order.

Findings

Each interviewee was self-aware and spoke with wisdom, insight and expertise about what approaches worked for them. Due to the small sample size, the pronoun he or she will be used randomly to help protect confidentiality. Footnotes attached to quotations (or summaries of quotations) are its corresponding interview question(s).

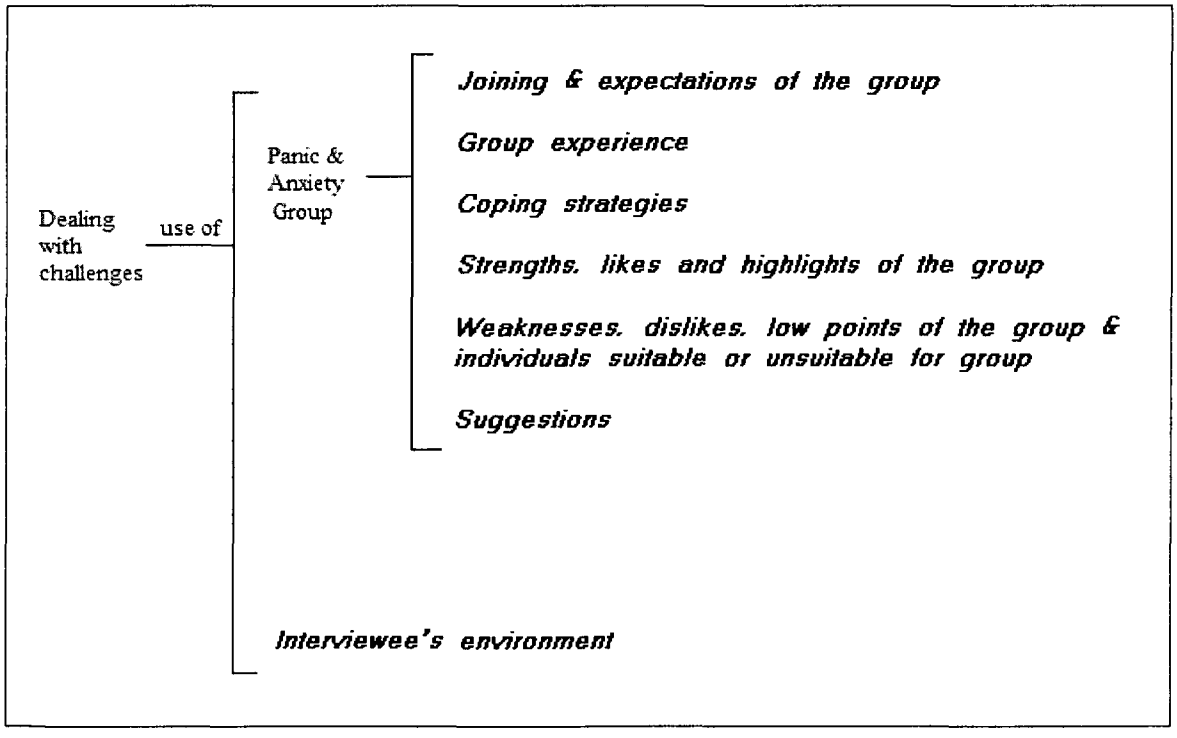

Figure 11. Themes That Emerged From the Interviews. This figure conceptualizes the themes (in bold) that emerged from the interviews.

The themes that emerged from the post-intervention interviews fit into the overarching topic of the interviewees searching for and exploring different ways to deal with challenges in their lives. These themes roughly follow the interview topics. The seven themes that emerged from the interviews were: (1) joining the group and expectations of the group, (2) the group experience, (3) coping strategies, (4) strengths, likes and highlights of the group (5) weaknesses, dislikes and low points of the group and individuals suitable or unsuitable for group, (6) suggestions, and (7) the interviewee's environment (See Figure 11).

Joining the Group and Expectations of the Group

All interviewees joined the panic and anxiety group to deal with anxiety and/or panic attacks. Within this theme, there were commonalities and differences.

> *I decided to take it (the group) because I have a (challenge) which is causing me to be very anxious and have panic attacks because I'm scared but at the same time I have to move on and I have to do it because I have to. I want to live. I want to have a better life so then the course was to help me to do that (interviewee #1)* [16].

All the interviewees joined the group because they were referred by a counsellor or psychiatrist. For interviewees # 1 and 2 the main reason in joining the group was to deal with anxiety and panic attacks by learning coping strategies. For interviewee #3 the main reason for joining the group was for the group experience rather than learning coping strategies for anxiety. This is likely because as interviewee #3 comments, *"the group wasn't actually specifically designed for me right, I have my panic attacks (but) panic attacks don't really affect me... I do have anxiety but it's usually manageable most of the time*[17]*"*. This interviewee felt, "*the best part of the group*

[16] What kind of decision process did you go through in thinking about whether or not to participate?
[17] If you didn't get that much out of the group. What would be the reason and why do you think?

for me was just an outlet to express how I feel[18]". Although the group is primarily didactic, this experience suggests that it can also be therapeutic.

All the interviewees reported they had no set expectations of the group and had more of a wait and see approach. The decision making process to join the group varied for interviewees. Interviewee #2 did have some reservations about joining the group.

> *Well I was feeling like I didn't really need it because I hadn't had panic attacks. I was a little nervous right. I was scared to go to the group. Ok I'm going to meet new people... Will this do anything for me? (I was) just kind of sceptical*[19].

This interviewee had concerns about "*what and who the course was going to be made up of and who was going to be instructing it and what we were going to do*[20]", which was resolved at the first session. This interviewee also stated that she would have liked to have more information about the group before it began, as she did not realize it was a psycho-educational group with structured coping skills and homework for each session.

> *I remembered when they (the receptionist) phoned I didn't want to go to a panic group. I'm not panicking. And then I got there and I realized ok maybe I needed it more than I thought. I figured that I would see how it was and if it wasn't useful then I would opt out but I found it useful and so I kept going. I started looking forward to it (interviewee #2)* [20].

Interviewees #1 and 3 had no concerns about joining the group. Of these interviewees, interviewee #3 mentioned that if there was a difficult person in the group then that was part of the purpose of joining a group to learn from this social experience. These two interviewees had previously attended one or more CAST groups but for interviewee #2 who had concerns about attending the group, this was the first time at a CAST group.

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[18] To what extent was the course what you expected it to be?
[19] So what other things were you concerned about before you joined the group?
[20] What extent did the things you were concerned about the course came true?

Group Experience

"I think the best part is the talking. Having the support that was the best part (interviewee #3)[21]". Support, universality, and learning in the group were involved in the superordinate theme, group experience. All interviewees found the group to be supportive. They expressed feeling like they belonged to a group and that the group cared about them.

> *(The group) they were really interested to hear how I had dealt with situations so that was kind of cool ... they want to hear how I'm doing. Well that's nice that people are concerned and want to help. I guess just feeling a part of the whole... they cared if I was there like if I didn't show up then they would be concerned (interviewee #2)*[22].

For participants to learn in a group and work on personal growth, it is essential that the participant feels a sense of safety and trust in the group (Gladding, 2003). This sense of safety and trust in the group is fostered by the support and caring from the group and feeling of belonging to the group.

Another form of relating among the group was universality. Interviewees #1 and 2 discussed universality, where "universality refers to the realization that individuals are not alone in their experience, and that others have similar problems" (Yalom and Lescz, 2005 cited from O'Connor, Gordon, Graham, Kelly & O'Grady-Walshe, 2008, p. 569). For example, the group helped them to feel more normal because there were others in the group in a similar situation or circumstance. Interviewees found it useful to talk about their week, hear how others coped and expressed feeling less alone and isolated from others.

> *I like it because there are other people in the group who also have the same problem as I do. So when they're talking about their problem. All of a sudden you're not thinking in your head, are you crazy it's just me, because it isn't. It's other people as well. It shows me that I'm not the only one and yes other people have difficulties with it and just because I'm having difficulty with it does not make me crazy (interviewee #1).*

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[21] Which of the things you experienced during the group would you carry over to your normal life? Or if not that's fine too.

[22] What role do you feel you played in the group?

> *I could start to relate to some of the other people's stories... And the whole you're not alone there's other people going through it, that's what I always find useful in various kinds of support groups that I go to, is that there's other people going through the same stuff as you. You're not the only one and you're not crazy (interviewee #2).*

Both these interviewees recognized that "you're not crazy" for having some "difficulties". This is an example of a coping strategy taught in the group known as cognitive restructuring where cognitive distortions are challenged. These statements challenge: (1) the name calling (of "crazy") and (2) absolute thinking by seeing the gray area of "having difficulty with it" instead of the two absolutes (or polarities) of being either "crazy" or "not crazy". The feeling of universality and presence and interaction of the group provides a literal challenge to those cognitive distortions. Note, in the former quote, the interviewee refers to his positive past group experience in groups reiterating the superordinate theme, interviewee's environment discussed at a later point in this thesis.

Throughout the interviews, all interviewees spoke about learning from participating in a group and learning from other group members, such as practicing social skills.

> *It (the group) helps reinforce, good skills, like being honest and open instead of trying to hide how I feel, not express it (interviewee #3)* [23].

Interviewees #1 and 3 emphasized the power of learning in numbers where a greater number of people means there is more help in problem-solving and more potential solutions.

> *When you take the course you learn things from the other people in the class, because we all talk about what we do to calm ourselves down or how we challenge certain situations. This learning helped me to cope and reduce my anxiety (interviewee #1)* [24].

In group there are more people than in one-on-one counselling and so it can be very beneficial to have more than one person to exchange ideas with because there are more ideas and diversity in opinions that can emerge from many people rather than just one. Notice in the latter quote, the

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[23] How did the course affect you personally?
[24] I was wondering how you got involved in the group?

use of "we". By using the term "we", the speaker identifies with the group and feels like a member of the group, which also reiterates the subtheme universality.

Coping Strategies

Although the interviews did not initiate any specific questions asking about the coping strategies or techniques taught in the group, participants spoke about these strategies. Any interview questions about coping strategies were follow-up or probing questions to responses by interviewees who initiated the topic of coping strategies. The interview questions were mainly focused on eliciting information on the participant's experiences of the group process. This strong emergence of this theme is a testament to the coping strategies and techniques taught in the group. Each interviewee stated that they had learned some of the strategies elsewhere. The group provided a refresher, a reminder to use them, and a safe place to practice them. The cognitive strategies discussed by interviewees were: (1) cognitive restructuring, (2) journaling, (3) quantifying anxiety/panic attacks, (4) self-awareness about anxiety level, (5) relaxation exercises (diaphragmatic breathing, 5-5-5, and grounding), (6) exposure, (7) balance of sleep, nutrition and/or exercise, and (8) goal-setting.

Cognitive restructuring. This strategy was learned and practiced by all interviewees. Interviewee #3 described how the biggest impact of the group aside from the group dynamic was *"learning, being reminded (about)... different distorted thoughts... how it effects your life and your behaviour and your actions*[25]*"*.

Journaling and quantifying anxiety and panic attacks. Journaling was also discussed as a coping strategy. For interviewees #2 and 3, the group provided a place to reflect about their anxiety level during the previous week. The importance of this aspect of the group is described:

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[25] If this applies, what happens in the group that makes a difference that you found? How it effects your life?

> *journaling I don't know if they specifically said to journal but I mean we had to write down our homework each day what our anxiety level is at and how many panic attacks we had. It helps if I put stuff on paper it kind of leaves me and its sort of out there (interviewee #2)* [26].

The same two interviewees who found it useful to journal found it difficult to quantify their panic attacks and anxiety level. As interviewee #3 put it "*it's hard to put numbers to these things right. I guess in theory it's a useful thing but it's really hard*[27]" while interviewee #2 stated,

> *I could never tell how many panic attacks I had. I knew if I had a really good or bad day so I always estimated like two to three because it didn't seem like that concise of a, like ok I'm having a panic attack right now. I just knew that some days I was really anxious and frazzled and if it was like that I must have had panic attacks at some point during this time*[28].

Interviewee #2 found it more difficult to quantify the number of panic attacks experienced per week but easier to quantify her anxiety level. Interviewee #3 found it difficult to quantify panic attacks and anxiety level and also did not find it very useful to do so but thought that it could be useful for other group members.

Self-awareness about anxiety level, relaxation exercises and exposure. The following three coping strategies were also mentioned as helpful by two interviewees: self-awareness about anxiety level, relaxation exercises (diaphragmatic breathing, 5-5-5,[29] and grounding[30]) and exposure. Notably, interviewee #3 who did not describe these coping strategies as helpful was

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[26] What changes in yourself do you see or feel are a result of the course?
[27] What would you say are the weaknesses of the program?
[28] For journaling your level anxiety and the number of panic attacks, how did you feel about that? (Probing and follow-up question to previous response)
[29] The 5-5-5 is an acronym for a coping strategy that uses five diaphragmatic breaths, then five diaphragmatic breaths while rolling your shoulder up and back and then five diaphragmatic breaths while rolling your shoulder up and back while saying a positive self-thought.
[30] Grounding is a type of coping strategy where an individual tries to feel grounded in their present reality and moment. There are many different types of grounding strategies but one example of this is an individual sits down, tries to relax and become comfortable, firmly plants both feet on the ground and tries to feel grounded or imagines they are a tree with roots extending from their legs and feet into the ground.

the same interviewee who spoke about joining the group for the group experience rather than learning the coping strategies. This interviewee focused more on the general strategies of cognitive restructuring, journaling, balance of sleep, nutrition and/or exercise and goal-setting, rather than the strategies that were more specific to anxiety. The reasons for this could be idiosyncratic.

Self-awareness about anxiety levels was considered an important strategy by interviewees #1 and 2. One interviewee emphasized it is helpful to address her anxiety level with a relaxation exercise or another coping strategy when her anxiety is low, rather than waiting until it was high: "*because once it (agitation) gets to a 10 it's so much harder to bring it down.... I've applied it every week and I think it's amazing. I think it's awesome (interviewee #1)*[31] ". While interviewee #2 similarly notes this self-awareness helps "*to try and nip it (the anxiety) in the bud*" and is one of the changes he sees in himself as a result of the course.

Once an individual becomes self-aware of their anxiety they can address it using a relaxation exercise, such as diaphragmatic breathing, the 5-5-5[29] technique, and/or grounding[30]. These exercises are described together because these coping strategies were practiced in conjunction and are used for relaxation. Interviewees # 1 and 2 enthusiastically discussed these as simple and practical strategies, especially the diaphragmatic breathing. Both of them gave specific examples of how they already had been using these techniques in their lives and how it had helped reduced anxiety[32].

> *(I) realize ok I'm getting a little anxious about this it's time to excuse myself for a minute or do one of the (relaxation) exercises they suggested and kind of reduce the anxiety (interviewee #2)* [33].

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[31] What else did you like about the class? If there is any.
[32] Which of the things you experienced in the group do you think will carry on to your normal (everyday) life?
[33] What changes in yourself do you see or feel are a result of the course?

As seen in this quote, these relaxation exercises can be used in specific situations when the individual are aware of their anxiety.

The two types of exposures, interoceptive exposure and real-life exposure were used. Of the two interviewees, one was frequently practicing graded real-life exposure and gave in-depth examples of how it had positively affected his life, such as decreasing avoidance of traveling in a vehicle. One plan he gave for working with real-life exposure:

> *if you're in a big department store and panicking and you feel like too many people are around you and you have to get out of there, go to the washroom. Something so simple. Hardly anyone in there. Go in there do some breathing exercises. Relax and then maybe you can go back out, finish your shopping and go home (interviewee #1)* [34].

The interviewee # 2 had plans to practice graded real-life exposure. For interoceptive exposure, interviewee #2 said she could picture using it in the future.

> *If your body is feeling fear but you can learn to work with it or work through it. I was breathing through a straw... to feel the physical sensations when you're getting anxious about something. It was like... you don't have to completely freak out just because you're tightening up or something. Like you can kind of work through it. It was kind of building up your exposure level*[35].

Some of these interoceptive exposure exercises gave the interviewee flashbacks which facilitators said should not be used by that participant because these would not helpful. For these types of exposure exercises, individuals should work with a trained professional to help guide the process.

Balance of sleep, nutrition and/or exercise. Interviewees # 2 and 3 discussed using the strategies of balancing sleep, nutrition and exercise. Interviewee #2 specifically stated that he was actively limiting his caffeine consumption to decrease fidgeting. Another interviewee commented that he often used the homework sheets to record significant events of the week

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[34] How have you found if any this course has affected you personally?
[35] Which of the things you experienced in the group do you think will carry on to your normal (everyday) life?

rather than recording panic and anxiety. Journaling "*reminded me to keep balanced, which is what I try to do in my life anyways. You know in terms of sleep, nutrition, exercise and stuff (interviewee #3)*[36]".

Goal –setting. Goal-setting was discussed by two interviewees.

> *I've always sort of had a problem taking too much on and you know not finishing a goal. So I did a few, we listed goals or steps that would lead to a main goal and so I started doing some of those. So that was definitely a good tool to use in life right*[37] *(interviewee #3).*

The PA group focuses on keeping goals small and manageable. This was practiced each session with group members creating weekly individual goals for themselves. Interviewee #1 commented that these weekly goals were a strength of the group, *"we need to not avoid everything and not just run and jump into everything either. Very tiny baby steps or you're going to get sick*[38]".

Strengths, Likes and Highlights of the Group

For the strengths, likes and highlights of the group, interviewees discussed: (1) number of facilitators, (2) the facilitators themselves, (3) structure of the group, (4) the group experience and coping strategies, and (5) miscellaneous items. Some of these responses were interspersed with responses from the questions about dislikes or weaknesses of the group.

Number of facilitators. Interviewees # 1 and 2 identified the presence of two group facilitators as a strength and something they liked about the group[39]. Interviewees stated this helped the group to run more smoothly and helped maintain trust if one facilitator was away.

> *There were two instructors so there was always one instructor that was the same because for a couple of the sessions someone else had to be there... It would be nice if it could be the same people throughout but at least having two... there was one familiar face*

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[36] What was the one (sheet) that you recorded on a daily basis that you found helpful?
[37] Can you tell me, what you found useful.
[38] What would you say were strengths of the program?
[39] Any other likes about the group?

> *because if there wasn't then that would be a huge trust factor. Consistency that way (interviewee #2)* [40].

In addition, one interviewee emphasized that having two instructors rather than one helped to deal with situations that come up in group to keep the group on track and decrease any chances of having the group go over time,

> *(With) two instructors during the group if one participant became very anxious due to group discussion then a facilitator can help that person, (which) leaves the other facilitator to continue with the program and this reduced (the chances of) the class running later (after the scheduled time)* (interviewee #1) [41].

Facilitators. All interviewees specifically identified the facilitators as empathetic, attentive and skilled.

> *Well having really good facilitators, who are willing to listen, and willing to let you speak your mind and are patient and are knowledgeable. For us, this group there was no problem in terms of getting off track (interviewee #3)* [42].

This comment encompasses statements made by all the interviewees. All interviewees gave examples of the attentiveness, flexibility and empathetic nature displayed by the facilitators by facilitating balance between talking and sharing among participants and keeping the group on topic.

> *The instructors were very attentive to the person talking. They weren't looking at the time or acting like... you're taking too long, I have to get back to whatever*[43] *(interviewee #1).*

> *They (the facilitators) were pretty good at keeping stuff on track because people can get side-tracked on talking about other things. And they were pretty good about ok well let's get back to the topic we're on (interviewee #2)* [44].

Interviewee #1 thought that facilitators helping group members at the end of a session was a wonderful support. This interviewee stated "*facilitators stayed at the end of the group when*

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[40] Any other strengths you can think of?
[41] This was additional information obtained from member-checking.
[42] So based on your experience what would you say were the strengths of the program?
[43] What was your role in the group?
[44] What was the low point? If there was one?

necessary, that's how understanding they were if someone became over anxious they would calm us down[45]". These characteristics are important in establishing a comfortable atmosphere for participants to feel safe and learn in the group. For example interviewee #2 liked the relaxed group atmosphere:

> *I guess that there wasn't too much pressure. You weren't forced to say anything you didn't want to say or whatever*[46].

Having knowledgeable facilitators in addition to the other characteristics help facilitate the learning in group:

> *It's actually really good (facilitator working on a person's problem on the blackboard) because we're applying it to real (life). Right at that moment it's real so we're taking what we learnt in class and helping this person with it. So I found it to be really good. The teachers are able to take your problem and nobody minds taking their problem on the black board and have the teacher break it down. So I really like it. Oh, I loved it. I just love it (interviewee #1)* [47].

These inputs about facilitators came from questions throughout the interview in addition to interview questions about the strengths and likes of the group[48]. Interestingly, this input about the knowledge, patience and flexibility of the facilitators also came in response to the interview questions about the low points and weaknesses of the group where the facilitators were discussed as positives and used to place the low points and weaknesses into context.

Structure of the group. All interviewees specifically mentioned appreciating the availability of water or tea during the group and the ten to fifteen minute break in the middle of

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[45] This was additional information obtained from member-checking.
[46] What did you like or what are some of the things you have really liked about the program?
[47] How do you feel about if you think an ideal (group) number is six but add a couple more because usually the class sizes get so small?
[48] How was this group different from other groups for you?; During the ten sessions you're with the same ten people the entire time, what kind of feeling do you have about being with the same people the entire time?; What was the low point? If there was one?; What you think might be a weakness of the course and why you did?

group [49]. One interviewee thought it helped create a social atmosphere and all interviewees found it provided a time for a drink or snack and/or a break for smokers. Interviewees recognized the effort to make the group comfortable for participants.

A group would be either in the morning for all the sessions or in the evening for all the sessions and all interviewees noted that the time slot of the group (either morning or evening depending on the interviewee) was the best compromise to meet individual needs[50]. For the day group sessions it suited those who did not have to work during those hours.

> *I've been in groups in the evening before. I guess if you're working it's good but for me it (the morning sessions) was good because... usually in the evening you're tired and you just want to go home (interviewee #3)* [51].

While the evening sessions made the group available for those who worked during the day while not running too late in the evening. "*I guess the time... was good and bad because it started at 5(pm) and normally I end work at 430... But on the other hand that was the only way I could get to a course because it was two hours (interviewee #2)*[52]".

Interviewee #2 appreciated the spacing and length of the groups (the weekly sessions for ten weeks) and repetitive nature of the groups in order to practice and learn the coping strategies.

> *It wasn't a one day course or something because... I don't think it would be enough practice because we kept practicing some of the relaxation and calming things throughout... and so I think it was good that it was over several months basically that we went over it*[53].

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[49] Any other strengths you can think of?; Would there be any weaknesses that concerns you?; What else would you recommend for the program?
[50] What else did you like about the course or the group?
[51] The time of the group, how convenient was that?
[52] What about weaknesses?
[53] So based on your experience what would you say are the strengths of the program?

She noted this as a strength of the course and mentioned this characteristic again as an important part of the course that made the group what it is, "(With) *repetition you have a better chance of having some of the information stick*[54]".

Group experience and coping strategies. The themes (1) group experience and (2) coping strategies were each described in more detail as superordinate themes because of the amount of data collected for each. These two themes were also identified as likes, highlights and strengths of the group by all interviewees.

> *Knowing it's not just you (universality), getting solutions to some of your problems because somebody else has found a solution (support and learning from others), or is doing something you never thought of (discussion of cognitive distortions coping strategies) (interviewee #1)* [55].

All interviewees stated the learning of coping strategies was facilitated by the group experience, which involves the process, dynamic and problem-solving with fellow members.

> *The connection (in the group dynamic) with some of the other women... they had some similar experiences (universality) so they could give me some advice on how that situation had worked out for them, practical advice (support, learning from others and coping strategies). Feeling that connection, like ok these people understand what it's like to go through this kind of stuff (universality) (interviewee #2)* [56].

> *Just being able to talk. Express, relieve stress by talking (in the group). Reinforcing the things that I found to be beneficial, like being able to talk about my problems and not hiding (group experience subtheme support). And all the distorted thoughts (a type of coping strategy) that come from that (interviewee #3)* [57].

The main coping strategies mentioned were: cognitive distortions and restructuring, awareness and education about anxiety and the relaxation techniques learned in group.

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[54] What do you see as the important parts of the course that make the panic and anxiety group what it is?
[55] Based on your experience what would you say were strengths of the program?
[56] What was the highlight of the group for you?
[57] What was the highlight of the group for you? Similar response to the question: So based on your experience what would you say were the strengths of the program?"

Miscellaneous items. Group size and materials were also discussed. Interviewees #1 and 2 liked that their groups were a small size of four to five clients[58]. Both of these interviewees felt more comfortable sharing in a smaller group. While one interviewee liked that her group was all women but also saw the benefit of a co-ed group. Ideal group size number is discussed in further detail in the suggestions section. This interviewee appreciated the duo-tang provided but noted it was too small for the manual[59].

Weaknesses, Dislikes and Low Points and Individuals Suitable or Unsuitable for the Group

Topics mentioned as weaknesses, dislikes and/or low points of the group were some aspects of the facilities, materials, group composition and dynamic and time management.

Facilities. Certain aspects of the facilities were noted as a weakness of the group, such as room temperature and table set-up. All interviewees noted the group room temperature was not ideal. Interviewee #2 mentioned the room was too warm[60] and interviewee #1 recommended air-conditioning for the room[61]. Although interviewee #3 found it could be chilly with the windows open sometimes[62].

Interviewee #3 found due to the table set-up "*it was just hard to get around if people were (seated at a table near a wall) on the edges then they had to make sure they pulled in (their seat) so people could get by*[63]" so it would be more ideal if the room was "wider"[63]; Although this interviewee liked the set-up of the table in a square since it allowed group member to face each other.

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[58] What did you like or what are some of the things you have really liked about the program?
[59] Based on your experience what would you say are the strengths of the program? and What are some things you don't like so much about the program?
[60] What about weaknesses? and What are some things you don't like so much about the program?
[61] What would you like to see?
[62] Would there be any weaknesses that concern you?
[63] Would there be any weaknesses that concern you?

Materials. A couple aspects of the group material and manual were noted as a weakness or low point of the group. Interviewee #2 found the typos and spelling mistakes in the client manual a concern because "*it didn't look very professional*[64]". These have since been corrected in the client manual. Interviewee #1 heavily emphasized he would like to see relaxation exercises practiced regularly in the group[65]. Interviewee #3 stated a weakness and low point of the group for her was that some material was not applicable or useful to her "the interoceptive techniques (and) charting the attacks, anxiety and stuff" but despite this the interviewee thought it could be useful for other group members[66].

Group dynamic and gender composition. Interviewees stated some aspects of the group dynamic and gender composition was a low point or weakness of the group. In terms of the group dynamic, interviewee #2 stated a low point of the group was "*people (group members) can get side-tracked on talking about other things*" but "*(the facilitators) were pretty good at keeping stuff on track*[67]". Interviewee #1 mentions he would like equal airtime for each group member while still showing compassion for those who might need more time. This interviewee notes that the class misses valued teaching and feedback from facilitators when a group member speaks more than their share of airtime[68].

In terms of gender composition of the group, an interviewee stated that her group contained only women and this was less beneficial because: "*It might have been nice to hear a*

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[64] What about weaknesses?
[65] What do you think might be a weakness of the course and why you did?
[66] What would you say are the weaknesses of the program? And what was the low point of the group if there was one.
[67] What was the low point? If there was one?
[68] What you think might be a weakness of the course and why you did?

guy's perspective of how panic and anxiety look for them[69]". At the same time she liked that the group was made up of women[70].

Time management. One interviewee noted a couple sessions went a little longer than scheduled. "*If they know ahead of time the last session takes a long time to fill out all the paper work. We need to cut through the first stuff a little faster (interview #2)*[71]".

Individuals suitable or unsuitable for the group. The interviewees had varying opinions of who might be suitable or unsuitable in joining the panic and anxiety group. An interviewee suggested that,

> *anyone with panic and anxiety should at least try (the group)... I mean you could always go and see (the group) and not go back. And call and say back, "You know I'm not okay with the group. I'm not comfortable" (interviewee #2)* [72].

Another agrees that the group could be helpful to anyone but states those experiencing very high anxiety should probably not attend the group.

> *(The group is) good for pretty much everybody but if a person's anxiety is too high then having panic attacks, obviously (the person might not be able to) or can't come there... if you're a person that knows how to handle anxiety and you don't panic... maybe you won't need it but I just feel it's just good for anybody to have people to talk to (interviewee #3)* [73].

While another considered individuals who show no interest in actively participating in the group and negatively affected the group should not join. This interviewee gave an example,

> *(this person) only came once and I just felt like you shouldn't be here because what (the person) was saying was negative. (That person) didn't even participate. You could see that (the person) thought that this was all garbage. One good thing because I've taken (the CAST) courses, so when I was taking this course, I knew, for me it's positive, I knew it's going to help me because they always have (interviewee #1)* [74]

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[69] What was the low point? If there was one?
[70] What did you like or what are some of the things you have really liked about the program?
[71] What about weaknesses?
[72] Who shouldn't take a group like this?
[73] Who shouldn't take a group like this?
[74] How did you feel about being part of a group? I mean like this group.

Suggestions

Suggestions for the group from the interviewees involved (1) group facilities, (2) follow-up phone calls, (3) practice of relaxation techniques every group session and (4) ideal group sizes.

Group facilities. A recommendation by interviewee #1 was "*we need better facilities*" because the building of the group room: (1) lacked air-conditioning, (2) the building door was locked after office hours so people would be locked out, for example if someone was late for an evening group they would not have a way of getting in and (3) "*was flooded during our last group session so it was necessary to find another space*[75]". This interviewee adds, "*what we're doing is important, so the facilities should reflect that.*" All three interviewees mentioned room temperature of the facilities as a weakness (refer to section on weaknesses, dislikes and low points of group for further detail).

Follow-up phone call. It was suggested that CAST counsellors contact clients with a follow-up or reminder phone call about the group. An interviewee suggested a follow-up call by the client's past facilitator to "*see how people are doing... maybe a month or up to 3 months later and see if they were still using any of this stuff or if they thought it would be useful to take it again in the next year (interviewee #2)* [76]". Another independently and similarly suggested that clients be called or informed about up-coming groups available by the client's counsellor or facilitator every six months or so.

> *Because before the 6 months is over if I do another course in my mind it may keep me from relapsing. Because the courses make you strong and you're able to...not quit taking medication but maybe reduce tranquilizers, maybe reduce pain killers. Find better ways of coping than popping a pill (interviewee #1)* [77].

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[75] What else would you recommend for the program? If there is anything, if not that's ok too.
[76] Would you have any recommendations for the program?
[77] I was wondering how you got involved in the group?

Regular practice of relaxation. Two interviewees commented that the regular practice of a relaxation exercise in every session would be beneficial. One interviewee recommended allotting "*five minutes (of relaxation breathing) at the beginning (of the session) and five minutes at the end (interviewee #1)*[78]" in the two session hours or extending the group session for ten more minutes. The idea is that it would help and remind group members to consciously and actively bring anxiety down from daily events and/or from learning CBT techniques during group that may trigger anxiety. Another interviewee noted *"you wouldn't need a lot (of time). We only did it for a few minutes and it was fine. There was a difference so you can even have it extended maybe 10 minutes (interviewee #3)*[79]". This interviewee suggested to practice relaxation "*at the end (of group) after people are finished talking*" might be helpful.

Ideal group sizes. The interviewees recommended different ideal group sizes. One interviewee commented that the size of the group should be informed by how to maintain the quality of the group rather than just increasing the group size:

> *The other group members expressed that as well that they like the smaller group so I don't know if that plays a factor in the funding or on-going availability of this program but if it does to say that I would consider this group a success that there was only three or four people near the end like that was very beneficial for those people that were still there versus... I don't know how whoever's looking at it it's like oh... it went from eight to three so it's a failure. You know we didn't have as many people go through so hopefully that's not a bad thing (interviewee #2)* [80].

One interviewee recommended four to five clients with two facilitators (interviewee #2)[81]. Another interviewee recommended five to six clients with two facilitators was the most ideal group size but thought the group could start with seven to eight clients because from attrition two

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[78] What else would you recommend for the program? If there is anything, if not that's ok too. There was additional information added that was obtained from member-checking.
[79] Another interviewee mentioned that she would want to do relaxation. How would you think of, if the first 5, 10 minutes you guys did relaxation techniques?
[80] What were you saying about enjoying the smaller groups?
[81] So what would be an ideal group size you would think would work for the program?

clients may drop-out, while she thought ten clients were too many (interviewee #1)[82]. While one interviewee thought five clients "*was not very many... because when someone didn't show there were only four (interviewee #3)* [83]" and recommended eight clients with two facilitators.

Interviewee's Environment

The discussion by interviewees about their environment outside the panic and anxiety group comprised the seventh theme, the interviewee's environment. For example, one interviewee commented on experiencing stressful life circumstances outside the group. This interviewee spoke about this in reference to his pretest-posttests, *"my anxiety score is probably higher after the course than before but that's only because it's been a super stressful time and I was looking forward to the group every week (interviewee #2)* [84]".

There are many resources for the interviewees to access beyond the PA group, which is just one part of the interviewees' lives for therapeutic helping to deal with challenges in life. All three interviewees were knowledgeable about support groups, as they had previously accessed different groups (organized through volunteers, non-profit or the health care system). The interviewees felt supported in these groups. The learning that interviewees experienced from previous groups was frequently echoed throughout many of the other themes that emerged from the interviews. Quotes to support this theme has been provided previously in this thesis and will not be repeated here (refer to Group experience section, universality on page 79 and Coping strategies section, cognitive restructuring and journaling on page 80-81). For example, the interviewee's environment theme is reiterated by the first two quotations in the Coping strategies section (on page 80-81) which were described in the context of interviewees learning various

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[82] What would you like to see? There was additional information added that was obtained from member-checking.
[83] What would you say would be an ideal size to facilitate this type of group?
[84] How you got involved in the panic and anxiety group. Could you tell me a bit about that?

coping strategies, cognitive distortions and journaling, both in the panic and anxiety group and outside of the group. The PA group worked as an avenue to remind interviewees to practice coping strategies that worked in the past for them and helped provide a safe platform to discuss what they learned at group.

Two interviewees actively planned to attend other future CAST groups because they found their experience, the group dynamic, personal process and learning in CAST groups to be valuable (interviewees # 1 and 3). One interviewee commented that the attendance of the groups helped her prevent relapses in her health (interviewee #1).

Relationships with mental health professionals were on-going and continued after the panic and anxiety group finished. One interviewee commented on the importance of communication among health care professionals and their client, such as a family doctor, counsellor and psychiatrist (interviewee #1).

CHAPTER VI: LIMITATIONS AND DISCUSSION

Limitations

As with all studies, this study has limitations which will be examined in this section. For the pre-post design the relatively small sample size and uneven male to female gender ratio[85] reduces generalizability of the pre-post design findings. The pre-post design was previously designed and put in place at CAST by a CAST staff member. Thus, for the pre-post design the researcher had no control over the pretests-posttests (measures), sample or method design. This effects the results since there are no follow-up measures and no baseline comparison possible. This might have been addressed by applying follow-up measures. For example behaviours related to anxiety could have been measured, 3 months, 6 months or 1 year after the group, so longevity of treatment outcomes could be measured. If a waitlist group was available during the time period of this study, waitlist clients could have been given pretest-posttests at around the same time the panic and anxiety group clients were given pretest-posttests (such as before the group and ten weeks later with possibly follow-up measures). Other limitations of the pre-post design were discussed previously, in the section, Pre-Post Design Method (See pages 37 -39).

An attempt was made to calculate clinical significance using a definition described by Jacobson & Traux (1991) for cut-off scores, c, "the level of functioning subsequent to therapy places that client closer to the mean of the functional population than it does to the mean of the dysfunctional (less functional) population" (p. 13). This definition required available normative functional population data and normative less functional population data; however this normative data was not available for many of the target behaviours. As Jacobson & Traux (1991) notes:

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[85] The man to woman ratio in this study is approximately 1:4, which is higher than the man to woman ratio, for anxiety disorders that affect Canadians, which is approximately 1:2 (Health Canada, 2002, p. 61).

> Not only are norms on functional populations desirable, but ideally norms would also be available for the dysfunctional (less functional) population. As others have noted (Hollon & Flick, 1988; Wampold & Jensen, 1986), if each study uses its own dysfunctional sample to calculate a... then each study will have different cutoff points. The results would then not be comparable across studies. For example, the more severely dysfunctional the sample relative to the dysfunctional population as a whole, the easier it will be to "recover" when the cut-off point is study specific (p. 13).

For these reasons clinical significance was not computed for this study.

As with all studies there are limitations to the post-intervention interviews portion of this study. Due to the small sample size, three interviewees, saturation of data from the interviews could not be reached. There is a small sample size due to time constraints. As a consequence of the small sample size, any relationships, patterns, or trends mentioned for the interviews are loosely termed as such and the post-intervention interviews do not represent a full study to stand on their own. Since the interviewees were interviewed within two weeks of their last session the longevity of the treatment outcomes were not evaluated. The post-intervention interviews are supplemental to the pre-post design. One of the interviewees was not included in the pre-post design data. This additional interviewee was added to enrich the interview data. The sample in the post-intervention interviews does not necessarily represent the sample in pre-post design; however the interviews can give some insight to explain the results observed in the pre-post data analyzes. The interviews attempt to answer the question, "What is the process and experience of participants?" which is a different sub-set of the research question and not addressed by the pre-post design. The pre-post design hypothesizes the target behaviour measured of clients will be lower at the conclusion of the CAST panic and anxiety group than at the beginning. The interviews can still give an exploratory insight on the process and experience of the panic and anxiety group because all three interviewees participated in the structured CAST panic and anxiety group.

For the post-intervention interviews, there were additional limitations. The post-intervention interviews had a threat to dependability (counterpart to reliability) because a stepwise replication "where two separate research teams deal separately with data sources that have been divided into halves" could not be conducted on the data because of the small sample size (Guba, 1981, p. 87). Although triangulation and reflexive practice was used there is a threat to confirmability (counterpart to objectivity). A confirmability audit was conducted by the researcher's supervisor; however this was not done by an external auditor. This was due to a lack of resources in finding an appropriate external auditor. Also as mentioned in the discussion on credibility, dependability and confirmability, triangulation was obtained through the use of quantitative (pretest-posttest data) and qualitative methods (interviews) but no overlapping qualitative methods was used. The other aspects of credibility, transferability, dependability and confirmability in trustworthiness were addressed appropriately.

Another limitation of this study is that it does not review other practices of counselling and/or psychotherapy aside from CBT. The CBT used in the groups, such as the PCT has been criticized by other therapeutic approaches for a narrow focus on individual behaviour and thought patterns, while disregarding the larger social context of clients' lives. For example, systemic and structural level influences such as the social, political and economic landscape individuals live in are neglected in CBT. CBT concentrates on the "present" and some therapies such as psychoanalytic therapy criticize CBT for the lack of emphasis on how a person's history and life story can affect individuals. Although these are relevant points, the CBT in the panic and anxiety group is designed to teach various tools that clients may find helpful.

The goal of this study's CBT group is to help clients manage symptoms and behaviours of anxiety disorders that in turn help clients to better deal with and cope with other aspects of

their lives. As with all therapies, not all clients will find every therapy helpful. For clients who find the group helpful this adds more tools to a client's ability to cope while not discounting any other therapies or approaches. This study and the theory behind the CBT taught in the panic and anxiety group does not exclude different types of learning outside of the group nor should it, nor does it claim to be exhaustive in addressing all issues in life. Learning is fluid across time, resources, and relationships.

Pretests-posttests Discussion

Affective and Somatic Symptoms of Anxiety (General Anxiety)

This study detected significantly less general anxiety after the intervention for the average client. This finding reinforces the trend in the literature (Klosko et al., 1990; McEvoy & Nathan, 2007; Oei & Boschen, 2009; Ost & Westling, 1995; Telch et al., 1993; Treat et al., 1998; Westling & Ost, 1999). Ost & Westling (1995) with a twelve-session CBT observed the average client gained a whole threshold of functioning "marked to severe anxiety" to "minimal to moderate anxiety" [pre average=49.2 (SD=8.8), post average=36.4 (SD=7.9)]. This improvement in a whole level of functioning was also found in this study [pre average=47.91 (SD=10.46), post average=42.33 (SD=9.94)]. Westling & Ost (1999) found a gain in functioning threshold after brief CBT treatment from "minimum to moderate anxiety" to "within normal range" [pre average=38.20 (SD=2.86), post average=32.20 (SD=2.20)] for clients diagnosed with PD with or without agoraphobia. Comparatively, Barlow et al. (1989) found general anxiety was not significantly different after treatment between a control and CBT intervention group. Although other studies found similar results, different pretest-posttests were used to measure anxiety, therefore scores and thresholds of functioning could not be compared directly. However, some result from other studies are: Oei & Boschen (2009) observed a significant gain in functioning

from, moderate anxiety to a lower version of that functioning [Beck Anxiety Inventory: pre average=25.60 (SD=12.81), post average=17.39 (SD=13.06)] for group CBT in an outpatient program for clients diagnosed with different anxiety disorders and possible comorbid disorders (PD, GAD and PTSD and some comorbid with MDD) and McEvoy & Nathan (2007) detected the same [Beck Anxiety Inventory: pre average=21.3 (SD=12.3), post average=16.7 (SD=10.9)].

Anxiety Sensitivity (Fear of Anxiety Related Symptoms)

Anxiety sensitivity has shown to significantly decrease for clients attending CBT treatment (Smits, Berry, Tart & Powers, 2008; Telch et al., 1993). For the CAST panic and anxiety group, the average client significantly gained in a whole threshold of functioning in anxiety sensitivity from before group, "agree some" (2.0) to "agree a little" (1.6) after the group.

Comparatively the average ASI3 score before attending the CAST panic and anxiety group, 36.0 (SD=15.36), 2.0/item (18 items), is higher than preliminary norms collected by Taylor et al. (2007) for individuals experiencing anxiety disorders [Panic disorder, 32.6 (SD=14.3), 1.8/item, Social anxiety disorder, 31.4 (SD=11.9), 1.7/item, Obsessive compulsive disorder, 26.3 (SD=16.8), 1.4/item and Generalized anxiety disorder, 27.5 (SD=16.5), 1.5/item]. This is also the case for data collected by Escocard, Fioravanti-Bastos & Landeira-Fernandez (2009) who found the average ASI3 score for individuals experiencing anxiety disorders was 30.9 (SD=15.7), 1.7/item.

The average ASI3 score after attending the CAST panic and anxiety group, 29.17 (SD=15.84), 1.6/item was lower than preliminary ASI3 score norms (Taylor et al., 2007) for two specific diagnostic groups, Panic disorder and Social anxiety disorder. Although this study's treatment average ASI3 score significantly decreased after treatment it was higher than the preliminary norms for two diagnostic groups in Taylor et al.'s (2007) study (Obsessive

compulsive disorder and Generalized anxiety disorder) and non-clinical samples, 12.8 (SD=.6), 0.7/item and Luzon, Harrop, & Nolan's (2009) observed preliminary norms for nonclinical samples was 10.9 (SD=5.7), 0.6/item.

Since the ASI3 is a relatively recently revised measure (Taylor et al., 2007) many of the studies in this area used the original ASI rather than the ASI3, thus, direct comparison of those scores could not be made. Unfortunately, studies using the ASI3 before and after CBT treatment were not found in the literature for comparison.

Number of Panic Attacks Experienced Per Week

This study's finding of no significant change before and after treatment for the average number of panic attacks experienced by clients diverges from the research literature. It is generally reported that after CBT the average number of panic attacks decreases and/or there is an increase in the percentage of panic-free clients (Barlow et al., 1989; Telch et al., 1993; Wade et al., 1998). The average number of panic attacks before treatment in this study (pre average= 2.28, SD=2.99, post average= 2.26, SD=3.27) are comparable to a similar study conducted at a community mental health agency, although Wade et al. (1998) observed a significant reduction in scores after group or individual CBT (pre average= 2.0, SD=2.4, post average= 0.1, SD=0.3). Telch et al. (1993) also concluded there was a significant decrease in panic attack frequency experienced by clients after group treatment (pre average= 4.3, SD=9.5, post average= 0.2, SD=0.5), where there were 4 to 6 clients per group. In contrast, Barlow et al. (1989) did not find a significant difference in panic attacks experience per week from comparing an individual CBT treatment group to a control group (pre average= 1.2, SD=1.0, post average= 1.0, SD=2.6). Barlow et al. (1989) did detect a significant increase in the percentage of panic-free clients at pre-treatment 15%, compared to 85% at post-treatment, which is in congruence with Wade et al.

(1998) (18% and 87% respectively) and Telch et al. (1993) (30% and 85% respectively). However, this study found no change in the percentage of panic-free persons before treatment (40%) and after treatment (40%). Although this absence of change in the number of panic attacks experienced by clients before and after treatment may not be as important as clients showing increased competence and progress in coping and managing better in other aspects of functioning in a their daily life. This is the goal of the CBT intervention.

Panic Attack Intensity

In this study, despite no difference in the pre and post-number of panic attacks experienced by the average client, the panic intensity experienced by the average client before treatment 5.3 (SD=1.5) was significantly less after treatment 4.2 (SD=1.8), on scale of 0-8. This finding supports the literature (Barlow et al., 1989; Klosko et al., 1990). Klosko et al. (1990) found that intensity of panic attacks significantly decreased at the end of individual CBT sessions compared to before [on a scale of 0-4, pre test average=1.5 (SD=0.5), post average=0.71 (SD=1.99)]. Barlow et al.'s (1989) study compared three active treatment groups (relaxation, a cognitive-interoceptive treatment and the combination of relaxation and cognitive-interoceptive treatment) and a waitlist group. Barlow et al. (1989) found the "intensity of panic attacks (on a scale of 0-8) tended to be less in the active treatment groups (pre average=6.08, post average=5.11) in comparison to a slight increase in the waitlist group (pre average=6.00, post average=6.35)" (p. 271).

While Alone, Severity of Avoidance Behaviour of Certain Common Situations

There is support of the literature for this study's finding that avoidance of common situations while alone significantly decreased for the average client in the CAST panic and anxiety group (Marchand et al., 2008; Oei & Boschen, 2009; Roberge, Marchand, Reinharz, &

Savard, 2008). This significant reduction from before treatment "avoid half the time" to a lower version of that functioning which is closer to "rarely avoid" after treatment [pre average=2.59 (SD=.97), post average=2.37 (SD=.86)] was found in another routine community mental health practice setting (Oei & Boschen, 2009). Oei & Boschen (2009) examined a CBT for anxiety disorders in clinical routine practice, and found the same significant decrease [pre average=2.33 (SD=.99), post average=2.11 (SD=.96)]. Other studies have discovered a more pronounced effect. Roberge et al. (2008) observed in their group CBT treatment a gain in a whole threshold of functioning from "avoid half the time" before the treatment to "rarely avoid" after treatment [pre average=3.7(SD=.9), post average=2.1(SD=1.0)]. Another example is a group CBT treatment in Montreal, Marchand et al. (2008) found a gain in over a whole threshold of functioning from "avoid half the time" before treatment to between "rarely avoid and never avoid" [pre average=3.17(SD=.83), post average=1.89(SD=.83)].

While Accompanied, Severity of Avoidance Behaviour of Certain Common Situations

The avoidance of common situations while accompanied for the average client in this study is similar to other clinical routine practice research. For a CBT group, Oei & Boschen (2009) observed the average client significantly gained from between "rarely avoid and never avoid" before treatment to a lower version of that functioning [pre average=1.8 (SD=.6), post average=1.6 (SD=.8)]. The same thresholds of functioning for before and after treatment were obtained in this study [pre average=1.98 (SD=.80), post average=1.62 (SD=.52)]. With more intensive treatment, there are more noticeable outcome gains. Waddell & Demi (1993) observed for an intensive partial hospitalization program for treatment of anxiety disorders the average client significantly decreased in avoidance while accompanied from before treatment, "avoid half the time", 3.21 (SD=1.15) to "between "rarely avoid and hardly avoid", 1.83 (SD=.89) after

treatment. This treatment incorporated pharmacotherapy, relaxation, CBT, group therapy, family therapy and training in assertiveness, communication, parenting and time management.

Severity of Depressive Symptoms

The average client in the CAST panic and anxiety group displayed significantly lower depressive symptoms after treatment which supports the research literature (Falsettie, Resnick, Davis & Gallagher, 2001; McEvoy & Nathan, 2007; Telch et al., 1993; Treat et al., 1998; Salkovskis, Hackmann, Wells, Gelder & Clark, 2006). Many research studies used different types of pretests-posttests to measure depression. To compare pretest-posttest scores in the literature to this study, scores were converted to four thresholds of functioning for depression which are mild, moderate, severe and very severe using University of Pittsburg Epidemiology Data Centre's (2009) estimated comparison of total scores for QIDS interpretation. In the general research literature on CBT (individual and group) treatment the average client significantly gained in one whole threshold of functioning for depression from moderate to mild depression after treatment (Falsettie et al., 2001; McEvoy & Nathan, 2007; Telch et al., 1993; Treat et al., 1998; Salkovskis et al., 2006)[86]. This study shows a milder result where after treatment there was reduction by half a threshold of functioning from severe-moderate depression to moderate depression; While, Barlow et al. (1989) and Oei & Boschen (2009) did not find any significant changes in depressive symptoms from before and after treatment.

Frequency of Certain Fearful Thoughts

Reflecting results seen in the literature, the average client significantly diminished in the frequency of certain fearful thoughts after attending the CAST panic and anxiety group. The average client significantly gained in functioning from "thought occurs half the time I am

[86] Thresholds of functioning for depression where derived from the Beck Depression Inventory.

nervous and thought rarely occurs" before the CAST panic and anxiety group to lower version of that functioning after treatment [pre average=2.40 (SD=.71), post average=2.20 (SD=.64)]. Other studies also found significant improvements in this area. Marchand et al. (2008) noticed the average client significantly progressed from before group CBT with "thought occurs half the time I am nervous and thought rarely occurs" to between "thought rarely occurs and thought never occurs" [ACQ pre average=2.59 (SD=.54), post average=1.85(SD=.70)]. Roberge et al. (2008) observed the same results in functioning [ACQ pre average=2.9 (SD=.6), post average=1.9 (SD=.7)].

RMANOVAs and Correlations

For before and after treatment, the average client who had 90.5% attendance or less showed a significantly greater gain in functioning compared to the average client who attended the group greater than 90.5% of the time for the two target behaviours while alone and while accompanied severity of avoidance of common situations. This has not been seen in this literature and appears counterintuitive that the average client who attended less sessions had a greater gain in functioning. This could be due to the fact that the clients who had low attendance did not complete posttests and so data from these individuals could not be included in this analysis and thus these findings should be interpreted with caution as the attendance was very high and there was limited variance. An additional correlation analyzes found similar results where the increase in percentage of attendance is associated with an increase in change in test scores (posttest score minus pretest score) for the same target behaviours. Remember, higher test scores equates to a lower level of functioning, for example a higher scores for general anxiety means a lower level of functioning for general anxiety, which means a increase in test scores from pre-treatment to post-treatment (posttest score minus pretest score) means a lower level of

functioning is reached. Again, this finding should be interpreted with caution for the reason stated previously that those who had low attendance did not complete posttest data.

For before and after treatment, the average client who was not in the labour force showed a significantly greater gain in functioning compared to the average client who was employed in the labour force that was for the target behaviour while accompanied, severity of avoidance. This was not observed in the literature. This suggests that the average client not in the labour force might benefit from this type of treatment more significantly by decreasing their severity of avoidance (while accompanied) compared to the average client who was employed in the labour force. Interestingly for this the average posttest score (avoidance accompanied after the intervention) for those not in the labour force was still higher than the average pretest score (before the intervention) for those employed in the labour force (See Appendix P). This could be because for the average client who was not in the labour force they may have had more time to practice greater mobility while accompanied; Although, this was observed for only this one target behaviour and for this behaviour the average client who was not in the labour force still had less functioning at the end of the intervention compared to those employed in the labour force despite having greater change in functioning.

Recommendations for Future Measures. Recommendations for future suitable outcome measures in the panic and anxiety group will be discussed. Each of the outcome measures was examined for the information completeness relating to target behaviours relating to anxiety and how well they document this change (i.e., reliability and validity). This was undertaken incase CAST still intends to observe and analyze pretest-posttest results and to continue with measurement practices for their panic and anxiety group. The SAS, MIA, a version of the ASI and QIDS can be continued to be used but with slight changes to the ASI and MIA as

discussed below. The ACQ may not be necessary since there are many similar questions incorporated in the general anxiety and anxiety sensitivity pretests-posttests (SAS, original ASI and ASI3).

Rather than the ASI-R it would be recommended to use the original ASI or the ASI3. The original ASI has been around longer and thus has more studies to compare ASI scores to, such as norms and treatment outcome scores. The ASI3 is recommended over the ASI-R since the ASI3 has better psychometric properties (S. Taylor, personal communication, July 8, 2008; Taylor et al., 2007). Since the ASI3 is relatively new it is advisable to follow the literature on updates of the psychometric properties of this scale.

Suggestions would be to keep the MIA to measure how the treatment may affect clients in their practical daily life situations, although the more recent version of the MIA could be used that measures the panic attack intensity on a scale of 0-4 and has labels for the numbers which may make it easier to quantify for respondents. This is available at Chambless's website (Chambless, 2002).

SAS measures the general anxiety experienced by clients where the Beck Anxiety Inventory could also be used however there is a fee since it is copyrighted but this may be waived if it is for research purposes. Other measures of anxiety were generally twice as long or more to administer and thus not appropriate time-wise for the panic and anxiety group. Such as the Trimodal anxiety questionnaire, Depression anxiety stress scale and the State-Trait anxiety inventory and the widely use Hamilton anxiety rating scale needs to be administered by the clinician and take twice as long.

The continued use of the QIDS would be advisable since is free to use and has high internal consistency and validity (Rush et al., 2003). It is takes a relatively short time to

administer and score but the items cannot just be tallied up so for specific scoring instruction refer to University of Pittsburg Epidemiology Data Centre (2009).

Post-Intervention Interviews Discussion

Joining the Group and Expectations of the Group

One interviewee had concerns about how the group dynamic would play out before the group started and a different interviewee commented that an individual who joined her group dropped after the first session and appeared unsuitable for the group (See interview findings section, individuals suitable or unsuitable for the group). Although client questions are often answered during the first group session a suggestion to better address these concerns is that facilitators could arrange a short orientation or phone call with clients before a group starts. This way the client will at least know one person at their first group and this could help build a sense of comfort and safety in the group that all the interviewees discussed as being an important part of the group. It also provides an opportunity for clients and facilitators to evaluate if the group is suitable for the client and vice versa (Gladding, 2003, pp. 112-113). This is especially important to address concerns about group confidentiality, willingness to participate and attendance. As one interviewee mentioned she planned to attend the first group and see what it was about and then decide whether or not to continue in the group and since she found the group helpful she attended the rest of the sessions. An orientation-screening appointment could decrease the number of clients attending the first session and then dropping the group by addressing client questions and concerns before the group starts and screen out those not interested.

An additional option with smaller implications and usefulness is to provide a brief synopsis describing the group. This could be made available at the office (for example at the receptionist desk) or when clients are called to confirm attendance of the group (for example

receptionists can describe the group when calling clients). The description of the group could inform clients that the group teaches techniques and homework is involved. In addition a more positive group name may better deal with the stigma associated with the name of the group, the panic and anxiety group. For example the CBT group for depression is called the Changeways group rather than the depression group.

Group Experience, Coping Strategies, and Strengths, Likes and Highlights of the Group

Highlights of the group expressed by interviewees were: (1) the connection and social interaction interviewees had with members of their group and how this facilitated their learning process and (2) the learning of coping strategies taught by group members (independent of the manual), facilitators and the manual. These are similar to findings from O'Connor et al. (2008) who conducted post-intervention interviews with participants who attended a psycho-education group in a community mental health setting for individuals with a bipolar disorder diagnosis. Similar themes that emerged from O'Connor et al.'s (2008) interviews were the subthemes universality, socialization (described in this study in the superordinate theme group experience as the subthemes support, universality and learning from others) and coping strategies. The theme of valuing support from a group is echoed in Luckock, Mirza & Sharma's (2007) study on service users' view of a self-help pack for anxiety where these individuals worked on their own without a group. Dundas, Anderssen, Wormnes & Hauge (2009) interviewed clients after group CBT treatment (3 sessions) for test anxiety in post-secondary school and found they had reservations about using positive statements and emphasized that the restructuring of negative cognitive distortions should be realistic rather than just positive. Dundas et al.'s (2009) finding that clients' use of cognitive restructuring, use of interpersonal supports (friends or group facilitators) to validate this cognitive structuring and consideration of making tasks and goals

smaller and more manageable are all observed in this study (superordinate themes coping strategies and group experience); Although, Dundas et al. (2009) do not identify in their study whether or not their clients' discussion of interpersonal supports referred to group members. Interviewees in this study identified the group experience and coping strategies as strengths, likes and highlights of the group, where the group experience facilitated the learning of coping strategies.

Other types of groups for different types of clients detected similar findings. There are some similar themes observed in a mindfulness group for inpatients of an acute care unit with a variety of psychiatric assessments (bipolar affective disorder, depression, borderline personality disorder, paranoid schizophrenia and substance misuse) which are cognitive changes and practicing coping strategies and using them after the group (these were mindfulness-based intervention coping strategies) (M. York, 2007). Themes that emerged from participants in a mindfulness-based group for cardiac rehabilitation (Griffiths, Camic, Hutton, 2009) that were similar to this study are: (1) "development of self-awareness" where "participants reported developing increased and improved levels of awareness across a variety of domains during and since the intervention (p. 677)" (in this study: interviewees became more self-aware of their anxiety levels and became more self-aware through journaling and charting), and, (2) a within the group theme where participants enjoyed the group experience and found it normalizing to know there were others with similar experiences and circumstances (in this study: group experience, universality, strengths, likes and highlights of the group).

The group experience and coping strategies were described by interviewees in response to the interview questions about how the course affected them personally, changes they saw or felt in themselves as a result of the course, and experiences they thought would carry on into

their everyday life. These were: (1) increased self-awareness or journaling about anxiety, (2) practicing relaxation exercises (diaphragmatic breathing, 5-5-5 and grounding), (3) practicing cognitive restructuring, (4) practicing exposure exercises and (5) experiencing group support. The responses were grouped together for these questions because there was almost a complete overlap of the responses for these questions. All interviewees experienced three or all of the five areas and placed the greatest emphasis on the following four: self-awareness about anxiety, cognitive restructuring, relaxation exercises and group support and the least on exposure.

This study suggests that the skill of facilitators in psycho-educational groups helped produce improved client functioning in addition to the coping strategies and group experience. The main strengths and likes of the group by interviewees were the number of facilitators, the facilitators themselves, structure of the group and the group experience and coping strategies. The facilitators themselves include their skill at teaching coping strategies, facilitating, counselling and creating a welcoming environment conducive to personal learning and growth.

Weaknesses, Dislikes and Low Points and Individuals Suitable or Unsuitable for the Group

Weaknesses and dislikes of the group were certain aspects of the facilities, materials, group dynamic and time management of the group. Low points of the group were when group members became sidetracked discussing things other than the topic on hand or course material not applicable to the interviewee. However all interviewees noted the facilitators were skilled in getting group members back on track and one interviewee emphasized that when the group was sidetracked this was a concern since group members would miss out on teaching time and learning from facilitators which the interviewee found valuable. Interestingly, in Griffiths et al. (2009) two of six participants found some of their group discussions unclear, confusing, frustrating and/or disappointing. This was not the case in our study, although, an interviewee

found some of the material not as applicable to his situation but he recognized it may have been helpful to other participants in the group. Interviewees varied in their responses about who would be suitable or unsuitable for the group but as mentioned previously an orientation-screening meeting or phone call may address some of the concerns on who may be suitable for the group.

Suggestions

Suggestions for the group by interviewees were, to obtain better facilities, to give follow-up calls to former group participants, to practice relaxation techniques at each group session and different ideal group sizes. The overall impression from the interviewer is the interviewees appeared satisfied with their experience in the panic and anxiety group.

Facilities. Some ideas to address some of the weaknesses of the facilities mentioned by interviewees on the room temperature and/or locked doors after-hours are, depending on availability, to obtain rooms for groups with room temperature control and/or rooms with a buzzer or an intercom for groups held in the evenings. This could be a topic for management to look into other possible solutions to address these concerns. If are funds are available management might consider installing or finding facilities with these types of solutions.

Follow-up phone calls. Interviewees suggested that clients be asked about their progress and interest in retaking the group and/or signing up for other groups in follow-up phone calls to clients from one to six months after the group. The researcher agrees the suggestion of follow-up phone calls could be productive for facilitators and clients, where both could assess and learn possible affects from the group some time afterwards. This reiterates that the interviewees found this group beneficial and valuable and emphasizes that interviewees felt they and other clients would find it constructive to attend the group more than once. This suggestion by interviewees shows that clients are thinking of future possibilities and planning to work on personal growth.

Relaxation. Facilitators should consider an interviewee's suggestion to regularly practice relaxation for ten minutes in each session or consider asking their group if they would like to have this as an option. The intention of the relaxation is to try to actively decrease anxiety experienced from during the day prior to the group or experienced during the session.

Group sizes. Optimally an enrollment of six to eight clients who attend the group on a regular basis with two facilitators appears to be a good balance if the clients have committed to attending the group and taking into account sometimes one or two clients may be away for various reasons such as timing conflicts or illness. Treatments try to be available to as many participants who need them but the quantity of participants in the group and quality of the group are a difficult balance and it should be made clear that smaller group sizes can be very beneficial for some participants. Interviewees suggested class sizes that ranged from four to eight clients. One interviewee suggested four to five clients. Another suggested the group could start with seven to eight clients because from attrition two clients may drop-out of the group and he thought five to six clients was most ideal. While another interviewee suggested eight clients. Facilitators of a different CAST group, the self-esteem group suggested six to eight was an ideal class size with two facilitators (McQuarrie, 2002, p. 40). Despite different ideal group sizes suggested by interviewees all agreed two facilitators was an ideal number for a group.

Interviewee's Environment

The seventh, environment theme reiterates that this group does not happen in a closed vacuum. Interview questions on what brought the interviewees to the panic and anxiety group gave the researcher a glimpse into the interviewee's environment. All the responses related to finding ways to better cope with anxiety that effected everyday interactions or tasks in their lives, their environment.

Triangulation Using Pre-Post Design and Post-Intervention Interviews.

The pre-post design can address the research question of this study that is not addressed by the interviews and vice versa. The research question is "What is the efficacy of the panic and anxiety group for its clients?"

The pretests-posttests are important because the target behaviours are quantified which can then be statistically tested to see the probability of the pretest-posttest results occurring by chance, in the context of a community mental health setting in which the data was taken. This is important for continued funding of programs and showing management the efficacy of interventions at their agency. The pretests-posttests demonstrate after treatment there is a trend of statistically significant decrease in seven target behaviours in the average participants (See Table 4). The pretest-posttest target behaviour scores can be compared to the research literature to see where this group stands among that data (See pretest-posttest discussion section).

Although, there is a relatively small sample size for the interviewees, there are different ways the interviews can address the research question of this study that are not addressed by the pretests-posttests. So what is the efficacy (known as the competence in behavioural performance) by participants in the panic and anxiety group that can be addressed by the interviews and not the pretest-posttests? The competence in behavioural performance of participants can be put into the context of the participants' lives from the interviews. The outcomes the interviewees found in group that transferred into their lives and/or personally affected or changed them were: (1) increased self-awareness or journaling about anxiety, (2) practicing relaxation exercises (diaphragmatic breathing, 5-5-5 and grounding) (3) practicing cognitive restructuring and (4) experiencing group support. These specifics supplement the pretests-posttests. For example, from the interviews, we see the relaxation techniques helped interviewees better cope in day-to-

day tasks, rather than assuming this. The pretest-posttests show better functioning in target behaviours of the average client while the interviews show how participants may have reached that.

The blend of coping strategies and group experience appear to have helped the average participant improve significantly in functioning for seven of the pretest-posttest outcome variables (See Table 4). Interviewees stated the group experience helped facilitate learning of coping strategies to deal with anxiety. Thus, the interviews revealed the group experience helped facilitate learning of coping strategies to deal with target behaviours related to anxiety measured by the pre-post design. Interviewees felt supported and less isolated that contributed to a safe environment for learning techniques to cope with anxiety.

The average client in the group did not show any change in the number of panic attacks experienced per week and percentage of panic-free persons before and after the group; while in the research literature there is support that this panic and anxiety group treatment significantly decreases the number of panic attacks experienced per week and percentage of panic-free persons after the group. Part of this discrepancy may be explained by the interviews, where two of three interviewees specifically noted that they found it difficult to determine which of their experiences quantified as a panic attack and which did not (See interview findings, coping strategies, journaling and quantifying anxiety and panic attack). This may explain why there was no change observed in the number of panic attacks experienced per week by the average client, as clients may not have quantified a change if it existed because they may have had difficulty quantifying their panic attacks into numbers.

The other interview themes help to fill in gaps not addressed by the pre-post design in addressing the research question. In the theme, joining and expectations, an interviewee felt

anxiety about joining the group and how the group would be. This information allows facilitators and staff to contemplate how or if this situation needs to be addressed. If participants are less anxious at the first session this may increase group retention and facilitate learning which can help improve the efficacy of the group for future participants. The information supplied in the two superordinate themes (1) strength, likes, weaknesses, dislikes and (2) suggestions discussed by interviewees can address this study's research question which that can help improve efficacy of the group for future participants by giving descriptive recommendations and experiences relating to the group; Whereas, the pretest-posttests do not address the research question in this way. For example as suggested by interviewees, additional practice of relaxation exercises during the group sessions might be beneficial. After considering the interviews the researcher suggests an orientation-screening meeting could better ensure clients are invested in the group which hopefully would lead to fewer drop-outs.

There can be speculative generalization (R. York, 2009) that a similar panic and anxiety group treatment can create improved functioning in this study's target behaviours (general anxiety, anxiety sensitivity, panic attack intensity, avoidance while alone and accompanied, depression and frequency of fearful thoughts) to communities of similar clinical populations and demographics. The use of the interviews to triangulate the data with the pretest-posttest data gives us better speculative generalization of this intervention to clients of similar demographics. The pretest-posttest data helps place the data from the interviews into the context among the research literature that discusses statistical significance.

Comments by interviewees and handwritten notes by clients on the pretest-posttests revealed the pretests-posttests scores were higher for certain clients due to stressful life circumstances. This is important because it shows that during stressful life circumstances clients

do seek help to deal to with these challenges and it is not realistic to exclude them from treatment. This means that the external validity of this study is stronger than other studies that would exclude clients from treatment on the basis of experiencing a stressful situation within the last six months. This information supports that this study realistically reflects what works in the community and it therefore has strong external validity.

The demographics in the pretest-posttest data revealed all 34 clients were provisionally assessed with one or more psychosocial and environmental problems which help to corroborate findings that emerged from the interviews. These demographics supports the interview finding that emerged in the superordinate theme "joining the group" that interviewees joined the group to find ways to deal with challenges in their lives by illustrating the different types of challenges (psychosocial and environmental problems) faced by group members. In addition the pretest-posttest demographic data on provisional psychosocial and environmental problems assessment backs ups the theme interviewee's environment which noted that interviewees experienced stressful life circumstances outside the group (psychosocial and environmental problems). The superordinate theme, interviewee's environment provided information about the additional different resources that interviewees accessed in their environments. This theme may suggest the different resources that interviewee's accessed in their environment to deal with these provisional assessments of psychosocial and environmental problems.

CHAPTER VII: IMPLICATIONS, RECOMMENDATIONS AND FURTHER STUDY

Implications

Implications of this study is that it supports findings in the research literature that this type of CBT group for individuals experiencing anxiety and/or panic has been effective in decreasing many anxiety related target behaviours for clients. This study suggests that in a routine community mental health setting this type of CBT and length of group may not be as effective at decreasing the number of panic attacks experienced by clients as indicated by the research literature. Data from the post-intervention interviews suggest that clients believe repeating the group may be beneficial. This might encourage future research on clients repeating the group for additional benefit. This study assisted a local community mental health agency evaluate their panic and anxiety group and assess that it is beneficial to the average client that attends the group. Interviewees' interest in attending or being informed of other CAST groups and/or retaking the panic and anxiety group indicates interviewees felt confident the panic and anxiety group and other CAST groups would be productive for themselves and other clients to attend and served as a source of social support.

Many research clinical trials studying the efficacy of treatments have strict exclusion criteria for clients on the basis of medication use, the attendance of counselling, comorbid diagnosis, medical problems or clients experiencing a stressful, life-changing or traumatic incident (Borkovec & Castonguay, 1998; Chambless & Hollon, 1998; Marchand et al., 2008, Oei & Boschen, 2009; Wade et al., 1998). In routine community mental health these exclusion criteria are not practical as many clients seek treatment to deal with challenges or changes in their lives that are often categorized in these exclusion criteria. For example this study has clients different anxiety disorder presentations with comorbid diagnoses of anxiety disorder and

depressive disorder and at least two clients experienced stressful life circumstances during treatment. These exclusion criteria in controlled clinical trials diminish their treatment efficacy findings applicability (external validity) to routine community mental health settings. Since this study does not use these strict exclusion criteria this study's findings have greater applicability to routine community mental health settings. An implication of this research is the study of group CBT efficacy and service users' experience in community mental health settings in Canada is expanded upon in the research literature.

Recommendations and Further Study

Recommendations for the panic and anxiety group are discussed in further detail in the three sections: (1) Interview findings section, suggestions, (2) Discussion section, interviews discussion and (3) Discussion section, future pretests-posttests section. Some of the other recommendations for the panic and anxiety group were: to consider the interviewees' suggestions, such as to incorporate regular relaxation practice in the group and conduct follow-up phone calls to clients and to consider conducting individual pre-group orientation-screening sessions to confirm the group is appropriate for clients and vice versa. Another suggestion is if the CAST finds it relevant to continue further statistical research on the group, the ACQ could be removed and it would be interesting to evaluate pretest-posttest data of clients repeating the group to see if there is an improvement in client functioning.

Some possibilities of further study could be to examine: (1) how helpful the panic and anxiety group is to individuals repeating the group, (2) how individuals move beyond the group and continue to maintain or move towards recovery, (3) how this group compares with other CAST groups, (4) exploring how the CAST panic and anxiety group would fare for clients repeating the group in an abbreviated or shortened version (brief CBT) of the CAST panic and

anxiety group, (5) use of a different design such as the use of a waitlist group, or (6) use of an expanded qualitative component (such as focus groups and/or more individual interviews).

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APPENDIX A: Research Ethics Board Approval (UNBC)

UNIVERSITY OF NORTHERN BRITISH COLUMBIA

RESEARCH ETHICS BOARD

MEMORANDUM

To: Lani Ho
CC: Bruce Bidgood
Judy Hughes

From: Henry Harder, Chair
Research Ethics Board

Date: June 24, 2010

Re: **E2009.0422.069 & E2009.0422.070 (Extension)**
Studying the effectiveness and group experience of a cognitive behavioural group for adults experiencing anxiety and panic

---

Thank you for submitting the above-noted renewal/extension proposal to the Research Ethics Board. Your proposal has now been approved.

We are pleased to issue approval for the above named study for a period ending October 31, 2010 as we understand the data collection portion of the research is complete and this extension covers the thesis preparation and defense period only. Continuation beyond that date will require further review and renewal of REB approval. Any changes or amendments to the protocol or consent form must be approved by the Research Ethics Board.

Good luck with your research.

Sincerely,

Henry Harder

APPENDIX B: Research Ethics Board Approval (Northern Health Authority)

northern health

Northern Health Corporate Office
600-299 Victoria Street, Prince George, BC V2L 5B8
Telephone (250) 565-2649, Fax (250) 565-2640. www.northernhealth.ca

June 1, 2009 File #RRC-2008-0017

Lani Ho
3673 Forest Avenue
Prince George BC V2N 3Y7

Dear Lani:

RE: Study of a Panic and Anxiety Group Treatment for Adults

On behalf of the Northern Health Research Review Committee, I would like to thank you for submitting the amendments for your application *"Study of a Panic and Anxiety Group Treatment for Adults"*

Your amendments have met the requirements of the Northern Health Research Review Committee and you may proceed.

Enjoy your work! We look forward to hearing about your findings.

Sincerely,

Suzanne Johnston, Chair, NH Research Review Committee
Vice President, Academic Affairs and Chief Nursing Officer

SJ/sw

CC: Brigitte Loiselle
File

APPENDIX C: Letter of Support (Community Acute Stabilization Team)

northern health

COMMUNITY ACUTE STABILIZATION TEAM (CAST)
1444 EDMONTON ST 3RD FLOOR
PRINCE GEORGE BC V2M 6W5
PHONE: 250-565-2666 FAX: 250-565-2016

May 22, 2009

Ethics Committee
University of Northern British Columbia

Ethics Committee
Northern Health Authority

Re: Ms Lani Ho

To Whom It May Concern:

This letter is regarding Ms. Lani Ho's request to utilize the resources at the Community Acute Stabilization Team (CAST) for completion of her Master of Social Work Thesis. The Community Acute Stabilization Team, is a mental health outpatient department operating under Northern Health and the Mental Health and Addiction Services. In the past, this program was known in the community under the name of Clinical Day Services and Psychiatric Outpatient Services (POPS) of the Prince George Regional Hospital.

This request presents an exciting opportunity for CAST, to utilize the data collected over previous years that has not been aggregated and analyzed due to scheduling difficulties, and to have an evaluation of the "Panic and Anxiety" group completed.

This letter endorses the same access to research, data and consenting participants as our previous endorsement letter from May 7, 2008 but extends the date of access to include 2009. CAST fully endorses the proposal presented by Ms. Ho, to complete the following:

1. To have access to consenting participants, in 2008 and 2009 Panic and Anxiety Groups and also participate in the interview process as part of her evaluation.

2. To research and access secondary data (pre-test, post-test, and exit surveys), that CAST collects from their Panic and Anxiety Group participants (from 2002 to 2009 inclusive).

3. Researching and accessing demographics of these participants through Synapse, (an audited, secure, and confidential electronic clinical information management system), used by all Northern Health Psychiatric Physicians and Clinicians.

northern health

COMMUNITY ACUTE STABILIZATION TEAM (CAST)
1444 EDMONTON ST 3RD FLOOR
PRINCE GEORGE BC V2M 6W5
PHONE: 250-565-2666 FAX: 250-565-2016

4. To present these finding in her thesis, as is presented in her proposal.

Our support of Ms. Ho's proposal is conditional on the pending approval from both the Ethics Board at Northern Health, and the University of Northern British Columbia.

We look forward to reviewing the findings once the project is completed.

Sincerely,

Brigitte Voiselle M.S.W. R.S.W. (Clinical Supervisor)

Heather Price. R.N./R.P.N., A.D.P.DN (Team Leader for CAST)

Debbie Strang. R.N. (Northern Interior Rural and Community Manager-Mental Health and Addictions)

APPENDIX D: Self-Rating Anxiety Scale

Name: ______________________ Date: ______________________

Zung Anxiety Self-Assessment Scale

		None or a little of the time	Some of the time	Good part of the time	Most or all of the time
1.	I feel more nervous and anxious than usual	1	2	3	4
2.	I feel afraid for no reason at all	1	2	3	4
3.	I get upset easily or feel panicky	1	2	3	4
4.	I feel like I'm falling apart and going to pieces	1	2	3	4
5	I feel that everything is all right and nothing bad will happen	4	3	2	1
6	My arms and legs shake and tremble	1	2	3	4
7	I am bothered by headaches, neck and back pains	1	2	3	4
8	I feel weak and get tired easily	1	2	3	4
9.	I feel calm and can sit still easily	4	3	2	1
10.	I can feel my heart beating fast	1	2	3	4
11.	I am bothered by dizzy spells	1	2	3	4
12	I have fainting sells or fee faint	1	2	3	4
13.	I can breath in and out easily	4	3	2	1
14.	I get feelings of numbness and tingling in my fingers and toes	1	2	3	4
15.	I am bothered by stomach aches or indigestion	1	2	3	4
16.	I have to empty my bladder often	1	2	3	4
[illegible]	My hands are usually dry and warm	4	3	2	1
[illegible]	My face gets hot and blushes	1	2	3	4
19	I fall asleep easily and get a good night's sleep	4	3	2	1
20.	I have nightmares	1	2	3	4

Converting Raw Score Total to Anxiety Index

RAW SCORE	ANXIETY SCORE	RAW SCORE	ANXIETY SCORE	RAW SCORE	ANXIETY SCORE
20	25	40	50	60	75
21	26	41	51	61	76
22	28	42	53	62	78
[illegible]	[illegible]	[illegible]	54	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	31	45	56	65	[illegible]
26	33	46	58	66	83
27	34	47	[illegible]	67	84
[illegible]	[illegible]	[illegible]	[illegible]	68	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	69	[illegible]
[illegible]	38	[illegible]	63	70	[illegible]
31	39	51	64	71	89
32	40	52	65	72	[illegible]
[illegible]	41	53	66	[illegible]	91
34	[illegible]	54	[illegible]	74	[illegible]
35	[illegible]	[illegible]	[illegible]	75	[illegible]
36	45	55	70	76	95
37	46	57	71	77	96
38	48	58	73	78	98
39	49	59	74	79	99
				80	100

Raw Score Total [ ] **Anxiety Index** [ ]

Interpreting the Anxiety Index

Anxiety Index	Clinical Interpretation
Below 45	Within normal range
45 – 59	Minimal to moderate anxiety
60 – 74	Marked to severe anxiety
75 and over	Most extreme anxiety

- Check that all statements have been answered
- **Scoring values are printed next to the response**
- **Add up the Raw Total Score**
- **Convert the Raw Total to the Anxiety Index**

Instructions for use (Zung Anxiety Assessment Tool)

[illegible] The same [illegible] should administer this test each time [illegible] preferably the same [illegible] each time the test is administered.

3 The administration of this test should not be immediately after trauma or unsteady period.

4 Speak in a soft, pleasant voice.

5 Answer [illegible] questions by placing a check in the box to the [illegible] under the appropriate [illegible].

6 Add the Raw Score values (numbers to the right of the checks) for all questions and record the total in the "RAW SCORE TOTAL" box.

7 Compare the raw score to the anxiety index on the conversion chart and record the corresponding anxiety index in the "ANXIETY INDEX" box.

8 Compare the anxiety index with the clinical interpretation chart.

APPENDIX E: Sample of three items on the Anxiety Sensitivity Index-3

APPENDIX E: Sample of three items on the Anxiety Sensitivity Index-3

ASI 3

Please circle the number that best corresponds to how much you agree with each item. If any items concern something that you have never experienced (e.g., fainting in public), then answer on the basis of how you think you might feel *if you had* such an experience. Otherwise, answer all items on the basis of your own experience. Be careful to circle only one number for each item and please answer all items.

		Very little	A little	Some	Much	Very much
1.	It is important for me not to appear nervous.	0	1	2	3	4
2.	When I cannot keep my mind on a task, I worry that I might be going crazy.	0	1	2	3	4
3.	It scares me when my heart beats rapidly.	0	1	2	3	4

APPENDIX F: Mobility Inventory of Agoraphobia

This is reprinted with permission from Dr. Dianne L. Chambless. Investigators who wish to use this MIA instrument for sale or publication must contact Dr. Dianne L. Chambless, Ph.D., Department of Psychology, University of Pennsylvania, 3720 Walnut Street, Philadelphia, PA, 19104-6241. E-mail: chambless@psych.upenn.edu, Web site: www.psych.upenn.edu/~dchamb

Client Name: _____ Date _____

MOBILITY INVENTORY

Please indicate the degree to which you avoid the following places or situations because of discomfort or anxiety. Rate your amount of avoidance when you are with a trusted companion and when you are alone. Do this by using the following scale:

1 **Never avoid**

2 **Rarely avoid**

3 **Avoid about half the time**

4 **Avoid most of the time**

5 **Always avoid**

(You may use numbers half-way between those listed when you think it is appropriate. For example, 3 1/2 or 4 1/2). Write your score in the blanks for each situation or place under both conditions, when accompanied and when alone. Leave blank those situations that do not apply to you.

Places	When Accompanied	When Alone
Theatres		
Supermarkets		
Classrooms		
Department Stores		
Restaurants		
Museums		
Elevators		
Auditoriums or Stadiums		
Parking Garages		
High Places		
Tell how high _____		
Enclosed Space (e.g., tunnels)		

Open spaces.	Outside (e.g. fields, wide streets, courtyards)	
	Inside (e.g., large rooms, lobbies)	
Riding in	Buses	
	Trains	
	Subways	
	Airplanes	
	Boats	
Driving or riding in a car:	At any time	
	On expressways	
Situations:	Standing in lines	
	Crossing bridges	
	Parties or Social Gatherings	
	Walking on the street	
	Staying at home alone	
	Being far from home	
	Other (specify)	

We define a panic attack as:

1. a high level of anxiety accompanied by
2. strong body reactions (heart palpitations, sweating, muscles tremors, dizziness, nausea) with
3. the temporary loss of the ability to plan, think, or reason, and
4. intense desire to escape or flee the situation (Note: this is different from high anxiety, or fear alone)

What is the total number of panic attacks you have had in the last 7 days? __________

Please rate the severity of these attacks, on a 0 – 8 scale, where 8 is the worst

APPENDIX G: Quick Inventory of Depressive Symptomatology

The Quick Inventory of Depressive Symptomatology (16-Item) (Self-Report) (QIDS-SR16)

Name or ID _____ Date _____

CHECK THE ONE RESPONSE TO EACH ITEM THAT BEST DESCRIBES YOU FOR THE PAST SEVEN DAYS

During the past seven days...

1 Falling Asleep:

- ☐ 0 I never take longer than 30 minutes to fall asleep
- ☐ 1 I take at least 30 minutes to fall asleep less than half the time
- ☐ 2 I take at least 30 minutes to fall asleep more than half the time
- ☐ 3 I take more than 60 minutes to fall asleep more than half the time

2 Sleep During the Night

- ☐ 0 I do not wake up at night
- ☐ 1 I have a restless light sleep with a few brief awakenings each night
- ☐ 2 I wake up at least once a night but I go back to sleep easily
- ☐ 3 I awaken more than once a night and stay awake for 20 minutes or more more than half the time

3. Waking Up Too Early:

- ☐ 0 Most of the time I awaken no more than 30 minutes before I need to get up
- ☐ 1 More than half the time I awaken more than 30 minutes before I need to get up
- ☐ 2 I almost always awaken at least one hour or so before I need to but I go back to sleep eventually
- ☐ 3 I awaken at least one hour before I need to, and can't go back to sleep

4. Sleeping Too Much.

- ☐ 0 I sleep no longer than 7-8 hours/night without napping during the day
- ☐ 1 I sleep no longer than 10 hours in a 24-hour period including naps
- ☐ 2 I sleep no longer than 12 hours in a 24 hour period including naps
- ☐ 3 I sleep longer than 12 hours in a 24 hour period including naps

During the past seven days...

5. Feeling Sad:

- ☐ 0 I do not feel sad
- ☐ 1 I feel sad less than half the time
- ☐ 2 I feel sad more than half the time
- ☐ 3 I feel sad nearly all of the time

Please complete either 6 or 7 (not both)

6 Decreased Appetite:

- ☐ 0 There is no change in my usual appetite
- ☐ 1 I eat somewhat less often or lesser amounts of food than usual
- ☐ 2 I eat much less than usual and only with personal effort
- ☐ 3 I rarely eat within a 24-hour period and only with extreme personal effort or when others persuade me to eat

- OR -

7 Increased Appetite

- ☐ 0 There is no change from my usual appetite
- ☐ 1 I feel a need to eat more frequently than usual
- ☐ 2 I regularly eat more often and/or greater amounts of food than usual
- ☐ 3 I feel driven to overeat both at mealtime and between meals

Please complete either 8 or 9 (not both)

8. Decreased Weight (Within the Last Two Weeks)

- ☐ 0 I have not had a change in my weight
- ☐ 1 I feel as if I have had a slight weight loss
- ☐ 2 I have lost 2 pounds or more
- ☐ 3 I have lost 5 pounds or more

- OR -

9. Increased Weight (Within the Last Two Weeks).

- ☐ 0 I have not had a change in my weight
- ☐ 1 I feel as if I have had a slight weight gain
- ☐ 2 I have gained 2 pounds or more
- ☐ 3 I have gained 5 pounds or more

The Quick Inventory of Depressive Symptomatology (16-Item) (Self-Report) (QIDS-SR16)

During the past seven days...

10. Concentration / Decision Making

- ☐ 0 There is no change in my usual capacity to concentrate or make decisions
- ☐ I occasionally feel indecisive or find that my attention wanders
- ☐ 2 Most of the time I struggle to focus my attention or to make decisions
- ☐ 3 I cannot concentrate well enough to read or cannot make even minor decisions

11 View of Myself.

- ☐ 0 I see myself as equally worthwhile and deserving as other people
- ☐ 1 I am more self-blaming than usual
- ☐ 2 I largely believe that I cause problems for others
- ☐ 3 I think almost constantly about major and minor defects in myself

12 Thoughts of Death or Suicide

- ☐ 0 I do not think of suicide or death
- ☐ 1 I feel that life is empty or wonder if it's worth living
- ☐ 2 I think of suicide or death several times a week for several minutes
- ☐ 3 I think of suicide or death several times a day in some detail or I have made specific plans for suicide or have actually tried to take my life

13 General Interest

- ☐ 0 There is no change from usual in how interested I am in other people or activities
- ☐ I notice that I am less interested in people or activities
- ☐ 2 I feel I have interest in only one or two of my formerly pursued activities
- ☐ 3 I have virtually no interest in formerly pursued activities

During the past seven days.

14 Energy Level

- ☐ 0 There is no change in my usual level of energy
- ☐ 1 I get tired more easily than usual
- ☐ 2 I have to make a big effort to start or finish my usual daily activities (for example shopping, homework, cooking, or going to work)
- ☐ 3 I really cannot carry out most of my usual daily activities because I just don't have the energy

15 Feeling Slowed Down

- ☐ 0 I think, speak, and move at my usual rate of speed
- ☐ 1 I find that my thinking is slowed down or my voice sounds dull or flat
- ☐ 2 It takes me several seconds to respond to most questions and I'm sure my thinking is slowed
- ☐ 3 I am often unable to respond to questions without extreme effort

16 Feeling Restless.

- ☐ 0 I do not feel restless
- ☐ 1 I'm often fidgety, wringing my hands, or need to shift how I am sitting
- ☐ 2 I have impulses to move about and am quite restless
- ☐ 3 At times I am unable to stay seated and need to pace around

APPENDIX H: Agoraphobic Cognitions Questionnaire

This is reprinted with permission from Dr. Dianne L. Chambless. Investigators who wish to use this ACQ instrument for sale or publication must contact Dr. Dianne L. Chambless, Ph.D., Department of Psychology, University of Pennsylvania, 3720 Walnut Street, Philadelphia, PA, 19104-6241. E-mail: chambless@psych.upenn.edu, Web site: www.psych.upenn.edu/~dchamb

Client Name ________________ Date ________

AGORAPHOBIC COGNITIONS QUESTIONNAIRE

This questionnaire has two parts. Below are some thoughts or ideas that may pass through your mind when you are nervous or frightened.

1 Indicate how often each thought occurs when you are nervous. Rate from 1 - 5 using the scale below.

1 Thought never occurs
2 Thought rarely occurs
3 Thought occurs during half of the times I am nervous
4 Thought usually occurs
5 Thought always occurs when I am nervous

2 Circle the three ideas that occur most often when you are nervous.

_____ I am going to throw up

_____ I am going to pass out

_____ I must have a brain tumor

_____ I will have a heart attack

_____ I will choke to death

_____ I am going to act foolish

_____ I am going blind

_____ [illegible]

_____ I will hurt someone

_____ I am going to have a stroke

_____ [illegible]

_____ I am going to scream

_____ I am going to babble or talk funny

_____ I will be paralyzed by fear

_____ Other ideas not listed (Please describe and rate) ________________

APPENDIX I: Information Sheet and Consent Form

APPENDIX I: Information Sheet and Consent Form

UNIVERSITY OF NORTHERN BRITISH COLUMBIA
INFORMATION SHEET

Research Title: Study of a Panic and Anxiety Group Treatment for Adults
Researcher's Name: Lani Ho, MSW student, Social Work

What is the purpose of this study?:
The purpose of this study is to evaluate the effectiveness of the Prince George Community Acute Stabilization Team (CAST)'s panic and anxiety group. I am asking you to share your experiences as a participant of this group to help evaluate and provide recommendations to improve the group for future participants.

Participant Involvement:
If you agree to participate and contact me as the researcher, I will arrange a time, date and place for the interview that is both convenient and safe for you. With your written and verbal permission, the interview will be audio recorded or hand recorded. Your participation will require a time commitment of about one and a half hours. You will be asked to:

- Reflect back on your experiences with the panic and anxiety group
- Describe your experiences and process within the group as well as the group content.

Participation in this study is voluntary. If you choose not to participate your involvement in group activities will not be affected.

Potential Benefits and Risks:
The sharing of your knowledge and experience with the group will help improve the group intervention program for future participants by providing better insight for CAST facilitators to develop the group. There may also be indirect benefits to you to have the opportunity to share your experience and contribute in this knowledge building.

With participation in this study there is potential for feelings and thoughts to arise that are positive, negative or neutral. If at any time during the interview you experience distress you can:

- decline to speak of any part of your experience that you choose
- decline to answer any questions
- stop the interview
- withdraw any information you have already give during the interview OR decide at a later date when you will be able to view a verbatim transcription of the interview to access it for accuracy
- stop the interview and request assistance from a CAST counsellor

Should you require personal debriefing there will be an appointment at CAST scheduled with a counsellor for you. A list of counselling referrals will also be provided.

Confidentiality and Anonymity:
Please be assured that all information will be kept in strict confidence. I, the researcher and a Northern Health Research associate will be the only persons who will know who was interviewed and your name will not be shared with anyone else. All confidential material and data will be kept on a password-protected computer or stored in a secure, locked cabinet and will

be destroyed after seven years. All information that identifies you personally (ex. location, social context, family, particular identifying circumstances, etc) will be removed. When the study is presented to others or published no information that identifies you as a participant will be included.

Thank you for taking the time to read this information. Your participation would be greatly valued and I hope you will agree to participate. If you would like to learn more about the project or have concerns please contact Lani Ho at 565-2666 or my academic supervisor Judy Hughes at 960-5110. If you have any complaints about this project can be directed to the Office of Research, University of Northern British Columbia 960-5820.

Sincerely,

Lani Ho, MSW (Cand), B.Sc.

PARTICIPANT INFORMED CONSENT FORM

I, _____ have read the information sheet about this project and I understand that my participation is voluntary: □ Yes □ No

- I can conclude my participation at any time
- I can refuse to answer any questions and stop the interview;
- I can withdraw from the study and have my transcripts destroyed and/or returned to me

I understand that the information I share is confidential □ Yes □ No

- my name will not be identified in any report, publication or presentation

All my questions about my participation have been answered. □ Yes □ No

I consent for the interviewer to audiotape the interview □ Yes □ No

I consent for the interviewer to take handwritten notes of the interview □ Yes □ No

I have read and understand the conditions under which I will participate in this study and consent to participate in this study. □ Yes □ No

I acknowledge receipt of a copy of this consent form and an information sheet □ Yes □ No

This study was explained to me by: _____

I agree to take a part in this study:

_____ _____

Signature of Participant Date

I believe that the person signing this form understands the study and voluntarily agrees to participate.

_____ _____

Researcher Date

Thank you for your contribution to this project. Copy to participants

APPENDIX J: Semi-Structured Interview Guideline

APPENDIX J: Semi-structured Interview Guideline[87]

Introduction: Hi, my name is Lani. I am a Master of Social work candidate at UNBC. I am here to find out about your thoughts on the panic and anxiety group.

- Summarize the project, state the confidentiality policy, information sheet and informed consent form, ask about recording
- The questions I will ask will be around 3 topics: (1) what brought you to join the group, (2) How you feel about the group, (3) What you got from the group

How participant joined the group:

1. First, I'd be interested in knowing how you became involved in the panic and anxiety group. How did you find out about it?
    a. What about the group appealed to you?
    b. What previous experiences have you had in groups?
2. Some people may have difficulty deciding to participate in the group, and others decide fairly easily. What kind of decision process did you go through in thinking about whether or not to participate?
    a. What particular things were you concerned about?
    b. What was happening in your life that stimulated your decision to join the group?

Experience with the group and personal changes (if any)

3. To what extent was the course what you expected it to be?
    a. How was it different from what you expected?
    b. To what extent did the things you were concerned about before the course come true?
        b-1. Which things came true?
        b-2. What didn't come true?
4. How did the course affect you personally?
    a. What changes in yourself do you see or feel as a result of the course?
    b. What would you say you got out of the experience?
5. During the 10 sessions of the group you've been with the same group of people constantly. What kind of feeling do you have about having been a part of the same group for that time?
    a. What feelings do you have about the group?
    b. What role do you feel you played in the group?
    c. How was your experience with this group different from your experience with other groups?
    d. How did the group affect you?
    e. How did you affect the group?
    f. Did you feel supported? If so by whom?
6. To help the staff improve the program, I'd like to ask you to talk about your opinion of the program. What you think are the strengths and weaknesses of the program. What you like. What you don't like. What you think could be improved or should stay the same. Those kinds of things and any other comments you have.

---

[87] Interview guideline from Patton (2002, pp. 422-427).

   a. Based on your experience, what would you say are the strengths of the program?
   b. What about weaknesses?
   c. Let me turn now to personal likes and dislikes about the group. What are some of the things that you have really like about the program?
   d. What about dislikes? What are some things you don't like so much about the program?

7. What is it about the group that makes it have the affects it has? What happens in the group that makes a difference?
   a. What do you see as the important parts of the course, that makes the panic and anxiety group what it is?
   b. What was the highlight of the group for you?
   c. What was the low point?

8. How do you think this group affects you when you return to your home?
   a. Which of the things you experienced during the group will carry over to your normal life?
   b. What plans do you have to change anything or do anything differently as a result of this course?

9. Suppose you were being asked by a government agency whether or not they should support a group like this. What would you say?
10. Who shouldn't take a group like this?
11. What are some recommendations you have to improve the group?
   a. Any more suggestions on how you think the "panic and anxiety" group could be more effective?

Context Questions

12. Now I'm going to ask a few questions to get a sense of the bigger picture.
   a. How many sessions did you attend?
   b. What other groups have you attended in CAST? Outside?
   c. What does a normal week look like to you?
   d. How do you support yourself financially? (ex. full-time/part-time)
   e. How old are you or what age range are you in when you took part in the group?
   f. What is your living situation like?
   g. What is your cultural background?
   h. What would you like your pseudo-name[88] to be?

13. Okay, you've been very helpful.
   a. Was there something I should have asked you that I didn't think to ask?
   b. Any other recommendations for the group?
   c. Anything else at all you'd like to add?

Probing Questions
- Can you tell me a little more about that and why?
- Is this story typical of your experience?

Concluding: Ask participants if there are any questions or comments. Thank participant.

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[88] Pseudo-names were not used in the findings but are in the acknowledgements section.

APPENDIX K: Sample Member Check Invitation

APPENDIX K: Sample Member Check Invitation[89]

Dear _____,

Thank you for participating in both the weekly group sessions and the interview portion of the research about the panic and anxiety group intervention process. Attached is an interpretation of the interview you participated in. As we indicated earlier, we are distributing this interpretation to you to review for accuracy of the information. If there is anything here that you do not want to be included in the research, or you would like to have recorded differently, please contact me by phone (include office number) or e-mail (e-mail address) by _____(date). A final report should be available by _____ (date) at the University of Northern British Columbia library. Thank you again for your thoughtful participation in this research.

Sincerely,

Lani Ho

[89] Adapted from Kirby et al. (2006)

APPENDIX L: List of Support and Counselling Resources

APPENDIX L: List of Support and Counselling Resources

PRINCE GEORGE SUPPORT & COUNSELLING RESOURCES:

Community Acute Stabilization Team (*Formerly* Clinical Day Services and Psychiatric Outpatient Services)
Ph: (250) 565-2666; 3rd Floor 1444 Edmonton Street;
- *Psychiatric services to 19 years & older; Offers group counselling*
-www.northernhealth.ca

Alcohol & Drug Program (Adult) – (250) 649-7200; 1350 Alward Street
- *Alcohol and drug counselling – individual & family. Group programs also available.*

Carrier Sekani Family Services – (250) 562-3591; 987 4th Avenue
- *Services for Carrier bands in the area include mental health therapists / counselling*
-www.csfs.org

Community Outreach Assertiveness Services Team (*Formerly *Community Mental Health)
– (250) 565-7472; 3rd Floor 1444 Edmonton Street
-Outpatient clinical residential and rehabilitation services for people who have a serious and persistent mental illness. By appointment only.
- www.northernhealth.ca

Community Response Unit (CRU) – (250) 565-2668
- *Crisis counselling for adults with mental health concerns. This service also provides integrated referral services to mental health services for adults*
- www.northernhealth.ca

Counselling Centre – UNBC – (250) 960-6369; 3333 University Way
- *Counselling service regarding career, academic and personal counselling available to UNBC students.*
- www.unbc.ca/counsel/ or email: counselling@unbc.ca

Healthiest Babies Possible – (250) 561-2689; 2666 Queensway Avenue
- *Lifestyle & pre / post natal nutrition counselling to at-risk pregnant women*
- www.nfhs-pg.org or email: reception@nfhs-pg.org

Hospice Society – (250) 563-2481; 3089 Clapperton Street
- *Short term grief counselling*
- www.hospiceprincegeorge.ca or email: info@hospiceprincegeorge.ca

Immigrant & Multicultural Services Society (IMSS) – (250) 562-2900; 1633 Victoria
- *Support services & employment, career counselling to newcomers to the community.*
- www.imss.ca or email: imss.pg@shawcable.com

Intersect (Children's Mental Health Services) – (250) 562-6639; 1294-3rd Avenue
- *Services for children with mental health issues include counselling.*

Kikino Metis Child & Family Support Society - (250) 563-1661; 1560 3rd Avenue
-Provides broad-based community prevention and education programs that are geared towards everyone in the community their children.

Methadone Support Group – (250) 564-4422; 1110 4th Avenue
- *Support includes counselling for substance abusers*

Native Courtworker & Counselling Association of BC
– (250) 562-9513; 207-154 Quebec Street
- *Counselling, representation & other services for Native persons in conflict with the law*
- www.nccabc.ca or email: moisej@shawbiz.ca

Positive Living North
(250) 562-1172; Toll Free (in BC): 1-888-438-2437; 1563 2nd Avenue;
- *Support for persons living with AIDS/ HIV. Weekly meetings and outings, advocacy and client support services.*

Surpassing our Survival (*Formerly* Sexual Assault Centre Prince George)
- (250) 564-8302 (24 hours)
- *Assistance to adults, youth & children who have experienced sexual assault*
- email: pgsac@telus.net

PRINCE GEORGE CRISIS RESOURCES

Prince George Crisis Intervention Society – (250) 563-1214; Toll free: 1-888-562-1214
- The 24-hour line operates 24 hours a day, 7 days a week.
- The Crisis Prevention, Intervention & Information Centre for Northern BC is a non-profit organization dedicated to providing emotional support, suicide intervention and referral information to the people of Northern BC.
-www.northernbccrisissuicide.ca or email: pgcrisiscentre@telus.net

Bridget Moran Place (ASAP Housing) – (250) 563-5531; 590 Dominion Street
Toll free: 1-888-561-8055
- Emergency shelter for persons homeless or at risk.

Detox Assessment Unit – (250) 565-2175; 1308 Alward Street
- Safe, supportive environment for persons withdrawing from alcohol and / or drugs, 24 hour care (no charge).
- www.northernhealth.ca

Phoenix Transition House – (250) 563-7305
- Crisis shelter for women & children.

Transition House for Women & Their Children (E.Fry) – (250) 563-1113
- Crisis shelter for women & children; services include short term counselling for women who have suffered abuse.
- email: shelter@pgefry.bc.ca

APPENDIX M: Group Cohorts Mean Pretest and Posttest Scores for Eight Target Behaviours (Panic and Anxiety Group Treatment)

APPENDIX M: Group Cohorts Mean Pretest and Posttest Scores for Eight Target Behaviours (Panic and Anxiety Group Treatment)

Cohort M (SD)	Panic and Anxiety Group Treatment Pretests-Posttests Means															
	General anxiety[a]		Anxiety sensitivity[b]		Number of panic attacks [c]		Panic attack intensity[d]		Severity of avoidance (alone)[e]		Severity of avoidance (accompanied)[f]		Depression[g]		Frequency of fearful thoughts[h]	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	51.14	38.86	42.15	24.71	2.00	1.00	5.17	3.50	2.88	2.43	2.01	1.53	n/a	n/a	2.59	2.06
	10.19	9.26	13.12	15.66	1.63	1.41	0.76	0.50	1.05	0.88	0.82	0.61	n/a	n/a	0.69	0.58
2	48.00	48.00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.66	2.57
	6.48	7.35	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.61	0.54
3	46.57	41.86	31.17	29.50	0.67	0.17	5.00	0.00	2.32	2.48	1.87	1.68	14.43	11.86	2.15	2.10
	11.70	12.81	12.42	13.61	1.63	0.41	0.00	0.00	0.90	1.06	0.88	0.61	6.80	5.21	0.77	0.79
4	42.00	30.00	50.00	34.00	2.00	0.00	n/a	n/a	2.00	2.54	1.12	1.46	17.00	10.00	2.86	2.36
	0.00	0.00	0.00	0.00	0.00	0.00	n/a	n/a	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	37.00	39.00	40.00	37.50	1.50	1.00	4.00	4.50	2.55	2.06	2.06	1.59	15.50	13.00	1.75	1.93
	7.07	2.83	5.66	0.71	2.12	1.41	0.00	0.00	0.40	0.54	0.26	0.04	0.71	1.41	0.86	0.51
6	46.33	37.00	32.67	27.00	2.67	2.00	6.33	4.50	2.67	2.28	2.28	1.53	18.67	15.00	2.82	2.54
	7.02	10.39	20.64	19.67	1.15	0.00	0.58	1.32	1.32	0.91	0.97	0.51	10.21	6.25	0.35	0.66
7	42.50	46.50	37.50	36.00	6.50	5.75	5.00	6.00	1.65	1.90	1.15	1.21	14.00	12.50	2.64	2.46
	7.78	4.95	23.33	35.36	9.19	1.06	0.00	0.00	0.00	0.00	0.00	0.00	5.66	2.12	1.01	1.26
8	49.25	47.75	35.25	28.25	2.75	4.75	4.00	4.00	2.77	2.38	2.27	1.85	15.75	14.25	2.14	1.94
	10.81	4.79	20.17	11.95	3.10	6.29	2.00	1.73	0.98	1.13	1.05	0.61	5.12	6.70	0.88	0.56
9	56.00	45.57	29.75	30.25	2.67	4.33	6.88	6.25	2.94	2.39	2.08	1.69	13.67	10.17	2.38	2.27
	19.29	16.20	21.23	24.23	3.06	3.51	1.59	0.35	1.56	1.13	0.98	0.64	6.66	2.36	0.78	0.74

n/a denotes that the client wrote not applicable or the information was not available

[a] Measured by Self-rating Anxiety Scale. [b] Measured by Anxiety Sensitivity Index-3. [c] Number experienced per week and measured by Mobility Inventory of Agoraphobia. [d] Intensity of the panic attacks experienced per week and measured by Mobility Inventory of Agoraphobia. [e] While alone severity of avoidance of common situations or places measured by the Mobility Inventory of Agoraphobia. [f] While accompanied severity of avoidance of common situations or places measured by the Mobility Inventory of Agoraphobia. [g] Measured by Quick Inventory of Depressive Symptomatology. [h] Measured by the Agoraphobic Cognitions Questionnaire.

APPENDIX N: Sample Size for Group Cohorts for Eight Target Behaviours

APPENDIX N: Sample Size for Group Cohorts for Eight Target Behaviours

Cohort	Sample size for cohorts							
	General anxiety[a]	Anxiety sensitivity[b]	Number of panic attacks[c]	Panic attack intensity[d]	Severity of avoidance (alone)[e]	Severity of avoidance (accompanied)[f]	Depression[g]	Frequency of fearful thoughts[h]
1	7	7	4	3	6	6	0	7
2	4	0	0	0	0	0	0	4
3	7	6	6	1	7	7	7	7
4	1	1	1	0	1	1	1	1
5	2	2	2	1	2	2	2	2
6	3	3	3	3	3	3	3	2
7	2	2	2	1	1	1	2	2
8	4	4	4	3	3	3	4	4
9	3	4	3	2	3	3	3	3
Total	33	29	25	14	26	26	22	32

n/a denotes that the client wrote not applicable or the information was not available

[a] Measured by Self-rating Anxiety Scale. [b] Measured by Anxiety Sensitivity Index-3. [c] Number experienced per week and measured by Mobility Inventory of Agoraphobia. [d] Intensity of the panic attacks experienced per week and measured by Mobility Inventory of Agoraphobia. [e] While alone severity of avoidance of common situations or places measured by the Mobility Inventory of Agoraphobia. [f] While accompanied severity of avoidance of common situations or places measured by the Mobility Inventory of Agoraphobia. [g] Measured by Quick Inventory of Depressive Symptomatology. [h] Measured by the Agoraphobic Cognitions Questionnaire.

APPENDIX O: Normality Results of Target Behaviours (Repeated Measures ANOVAs)

Appendix O: Normality Results of Target Behaviours for the Repeated Measures ANOVAs

The following scores are normally distributed for seven of the eight target behaviours for the within-subjects factor time:

- pre-SAS raw scores, $D(33) = 0.12$, $p = .20$, n=33 and post-SAS raw scores, $D(33) = 0.83$, $p = .20$, , n= 33
- pre-ASI3 scores, $D(29) = 0.10$, $p = .20$, n=29 and post-ASI3 scores, $D(29) = 0.10$, $p = .20$, , n= 29
- pre-panic attack intensity scores, $D(14) = 0.17$, $p = .20$, n=14 and post- panic attack intensity scores, $D(14) = 0.17$, $p = .20$, n=14
- pre-MIA alone scores, $D(26) = 0.11$, $p = .20$, n=26 and post- MIA alone scores, $D(26) = 0.14$, $p = .20$, n=26
- pre-MIA accompanied scores, $D(26) = 0.13$, $p = .20$, n=26 and post- MIA accompanied scores, $D(26) = 0.17$, $p = .07$, n=26
- pre-QIDS scores, $D(22) = .16$, $p = .15$, n=22 and post- QIDS scores, $D(22) = .10$, $p = .20$, n=22
- pre-ACQ scores, $D(32) = 0.12$, $p = 20$, n=32 and post- ACQ scores, $D(32) = 0.11$, $p = 20$, n=32.

The following scores are significantly non-normal for the within-subjects factor time:

- pre-number of panic attack scores, $D(25) = 0.22$, $p = .002$, n=25 and post- number of panic attack scores, $D(25) = 0.22$, $p = .000$, n=25.

APPENDIX P: Repeated Measures ANOVAs of Client Characteristics and Target Behaviours (Tables 5-8)

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Table 5

Mean, Standard Deviation and Repeated Measures ANOVA Results for Education as a Function of Time

Education	df	Pretest	Posttest	*F*	
		M (SD)	*M* (SD)	*Education*	*TimeX Education*
Affective & somatic symptoms of anxiety (General anxiety)					
High school	1, 26	48.53 (10.73)	42.47 (10.27)	03 ns	.004 ns
Post secondary		47.77 (11.84)	41.92 (9.67)		
Anxiety sensitivity (fear of anxiety related symptoms)					
High school	1, 24	34.53 (16.47)	30.67 (16.30)	.05 ns	2.18 ns
Post secondary		37.00 (15.12)	25.82 (11.42)		
Number of panic attacks/week					
High school	1, 21	2.15 (1.86)	2.00 (2.24)	.03 ns	1.12 ns
Post secondary		1.40 (2.37)	2.40 (4.38)		
Panic attack intensity (on scale of 0-8)					
High school	1,11	5.53 (1.44)	4.88 (1.19)	4.20 ns	1.69 ns
Post secondary		5.00 (1.73)	2.80 (1.92)		
While alone, severity of avoidance					
High school	1, 22	2.82 (.83)	2.59 (.75)	1.26 ns	.10 ns
Post secondary		2.39 (1.11)	2.23 (.95)		
While accompanied, severity of avoidance					
High school	1, 24	2.16 (.80)	1.79 (.45)	1.09 ns	.02 ns
Post secondary		1.87 (.82)	1.53 (.55)		
Depression					
High school	1, 19	15.83 (5.84)	12.42 (5.18)	.04 ns	2.07 ns
Post secondary		14.33 (6.58)	12.94 (4.35)		
Frequency of certain fearful thoughts					
High school	1, 25	2.45 (.75)	2.32 (.55)	2.12 ns	.72 ns
Post secondary		2.21 (.70)	1.91 (.52)		

* $p < .05$, ** $p < .01$, *** $p < .001$, ns denotes not significant.

Table 6

Mean, Standard Deviation and Repeated Measures ANOVA Results for Attendance as a Function of Time

Attendance[a]	df	Pretest M (SD)	Posttest M (SD)	*F* *Attendance*	*TimeX Attendance*
Affective & somatic symptoms of anxiety (General anxiety)					
Attendance 90.5% or less	1, 31	49.35 (10.48)	44.47 (7.61)	.26 ns	.18 ns
Attendance more than 90.5%		46.38 (10.56)	40.06 (11.76)		
Anxiety sensitivity (fear of anxiety related symptoms)					
Attendance 90.5% or less	1, 27	40.64 (15.56)	31.93 (15.58)	1.86 ns	.57 ns
Attendance more than 90.5%		31.73 (14.42)	26.60 (16.19)		
Number of panic attacks/week					
Attendance 90.5% or less	1, 23	3.15 (3.76)	3.04 (3.89)	2.53 ns	.03 ns
Attendance more than 90.5%		1.33 (1.50)	1.42 (2.31)		
Panic attack intensity (on scale of 0-8)					
Attendance 90.5% or less	1, 12	5.43 (1.80)	4.25 (1.60)	4.20 ns	.04 ns
Attendance more than 90.5%		5.13 (.95)	4.17 (2.16)		
While alone, severity of avoidance					
Attendance 90.5% or less	1, 24	2.86 (.81)	2.35 (.48)	.36 ns	6.42*
Attendance more than 90.5%		2.40 (1.05)	2.39 (1.07)		
While accompanied, severity of avoidance					
Attendance 90.5% or less	1, 24	2.21 (.78)	1.57 (.46)	.40 ns	9.37**
Attendance more than 90. 5%		1.81 (.80)	1.65 (.56)		
Depression					
Attendance 90.5% or less	1, 20	16.00 (6.04)	12.60 (4.22)	.09 ns	.69 ns
Attendance more than 90.5%		14.75 (6.06)	12.54 (5.13)		
Frequency of certain fearful thoughts					
Attendance 90.5% or less	1, 30	2.47 (.83)	2.31 (.64)	.84 ns	.25 ns
Attendance more than 90.5%		2.32 (.57)	2.06 (.62)		

* $p < .05$, ** $p < .01$, *** $p < .001$, ns denotes not significant.

[a] The attendance median, 90.5% was the cutoff used to split the sample into 2 groups for comparison.

Table 7

Mean, Standard Deviation and Repeated Measures ANOVA Results for Age as a Function of Time

Age[a]	df	Pretest	Posttest	*F*	
		M (SD)	*M* (SD)	Age	*TimeX* Age
Affective & somatic symptoms of anxiety (General anxiety)					
Age 44.50 or less	1, 31	47.31 (10.68)	43.38 (9.93)	.006, ns	.902, ns
Age more than 44.50		48.47 (10.54)	41.35 (10.15)		
Anxiety sensitivity (fear of anxiety related symptoms)					
Age 44.50 or less	1, 27	33.86 (14.50)	30.71 (15.77)	.1.86 ns	2.44 ns
Age more than 44.50		38.07 (16.41)	27.73 (16.32)		
Number of panic attacks/week					
Age 44.50 or less	1, 23	1.57 (1.95)	1.86 (2.41)	1.28 ns	.35 ns
Age more than 44.50		3.18 (3.87)	2.77 (4.19)		
Panic attack intensity (on scale of 0-8)					
Age 44.50 or less	1, 12	6.13 (1.18)	4.00 (2.39)	1.19 ns	2.79 ns
Age more than 44.50		4.69 (1.38)	4.35 (1.33)		
While alone, severity of avoidance					
Age 44.50 or less	1, 24	2.54 (1.03)	2.48 (.79)	2.21 ns	2.21 ns
Age more than 44.50		2.64 (.95)	2.26 (.93)		
While accompanied, severity of avoidance					
Age 44.50 or less	1, 24	1.82 (.74)	1.59 (.45)	.51 ns	2.26 ns
Age more than 44.50		2.13 (.86)	1.63 (.59)		
Depression					
Age 44.50 or less	1, 20	15.33 (6.61)	12.13 (4.71)	.05 ns	.49 ns
Age more than 44.50		15.30 (5.38)	13.10 (4.72)		
Frequency of certain fearful thoughts					
Age 44.50 or less	1, 30	2.36 (.64)	2.22 (.61)	.01 ns	.53 ns
Age more than 44.50		2.44 (.79)	2.17 (.68)		

* $p < .05$, ** $p < .01$, *** $p < .001$, ns denotes not significant.

[a] The age median, 44.5 was the cutoff used to split the sample into 2 groups for comparison

Table 8

Mean, Standard Deviation and Repeated Measures ANOVA Results for Employment as a Function of Time

Employment[a]	df	Pretest	Posttest	*F*	
		M (SD)	*M* (SD)	Employment	*TimeX* Employment
Affective & somatic symptoms of anxiety (General anxiety)					
Not in labour force	1, 30	51.94 (10.67)	44.88 (7.97)	4.86*	.66 ns
Employed		43.81 (9.191)	39.56 (11.46)		
Anxiety sensitivity (fear of anxiety related symptoms)					
Not in labour force	1, 26	41.13 (17.70)	34.40 (15.85)	5.32*	.01 ns
Employed		29.69 (15.96)	22.38 (14.16)		
Number of panic attacks/week					
Not in labour force	1, 22	3.00 (3.69)	2.96 (2.53)	1.31 ns	.03 ns
Employed		1.58 (2.19)	1.75 (3.96)		
Panic attack intensity (on scale of 0-8)					
Not in labour force	1, 12	5.69 (1.25)	4.67 (1.34)	.3.58 ns	.02 ns
Employed		4.60 (1.67)	3.4 (2.33)		
While alone, severity of avoidance					
Not in labour force	1, 23	3.08 (.96)	2.80 (.79)	8.74 ns	.37 ns
Employed		2.10 (.77)	1.96 (.76)		
While accompanied, severity of avoidance					
Not in labour force	1, 23	2.35 (.84)	1.82 (.58)	4.99*	4.29*
Employed		1.63 (.65)	1.47 (.40)		
Depression					
Not in labour force	1, 20	18.27 (5.29)	14.73 (4.61)	7.32**	1.27 ns
Employed		12.36 (5.18)	10.41 (3.68)		
Frequency of certain fearful thoughts					
Not in labour force	1, 29	2.61 (.74)	2.35 (.65)	3.53 ns	.25 ns
Employed		2.16 (.65)	1.99 (.58)		

* $p < .05$, ** $p < .01$, *** $p < .001$, ns denotes not significant.

[a] The groups part-time and full-time employed were grouped together into the one category, employed.