5-18-2016

An Exploratory Study of Test Anxiety As It Relates To The National Clinical Mental Health Counseling Examination

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An Exploratory Study of Test Anxiety As It Relates To The National Clinical Mental Health Counseling Examination

by

Alyson M. Carr

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Curriculum and Instruction with an emphasis in Counselor Education Department of Leadership, Counseling, Adult, Career, Higher Education College of Education University of South Florida

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Date of Approval
June 23, 2016

Keywords: high stakes examinations, cognitive behavioral theory, trait state anxiety theory, information processing theory

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DEDICATION

This project is dedicated to my soul mate, and to our beautiful son.
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ABSTRACT

Test anxiety involves a variety of physiological, cognitive, and emotional components. Those suffering from high test anxiety seem to perform poorly on examinations because test anxiety can contribute to information processing challenges both while studying for tests and during evaluative situations. Current research indicates that when a training program is applied that incorporates cognitive behavioral techniques as well as study skills training, highly test anxious individuals can overcome information processing challenges, increase their academic performance, and earn higher scores on tests.

In this study, a training program (Counseling Exam Test Anxiety Intervention) combining cognitive behavioral techniques and study skills training was applied to highly test anxious counselors and counselors in training preparing to retake the National Clinical Mental Health Counseling Examination (NCMHCE) after failing it at least once. This study makes the first known attempt to examine test anxiety specifically associated with the NCMHCE. The research questions guiding this study related to exploring the nature of test anxiety, any changes that occurred during administration of the Counseling Exam Test Anxiety Intervention (CETAI), and whether or not the CETAI was effective in terms of decreasing test anxiety and increasing academic performance. The findings revealed that when participants in this study applied the skills they learned from the CETAI, they improved their scores on practice tests, experienced an increase in confidence, and the majority of them successfully passed the NCMHCE when they retook it.
CHAPTER I INTRODUCTION

Background

The National Clinical Mental Health Counseling Examination (NCMHCE) is a credentialing examination that includes 10 clinical simulations designed to evaluate “a broad array of clinical competencies beyond merely the recall of isolated facts” (NBCC, 2015). All of the simulations are divided into five to eight sections that are categorized as assessing either Information Gathering or Decision Making skills. Passing the NCMHCE is a requirement for counselor licensure in many states as well as for the Certified Clinical Mental Health Counselor (CCMHC) national certification. In addition, the NCMHCE is one of the examinations used to determine eligibility to work within the military health systems, which involves providing counseling to military service men and women, their families, and veterans (NBCC, 2015).

The NCMHCE has been administered since 1997 (in its current 10 simulation form) and has a failure rate of between 40-45% (P. Brown, personal communication, March 12, 2015). Whether these percentages reflect a range of scores based on a large or small number of administrations as well as whether these percentages reflect the outcomes of first time test takers or re-takers is unknown.

Pass rates of two other standardized credentialing examinations for 2012-2015 were compared with the NCMHCE pass rates. The Bar Examination, which is administered to individuals wishing to practice law, and for the CPA Examination, which is administered to individuals who wish to become Certified Public Accountants were compared to the NCMHCE. According to The Bar Examiner (2015), first time test takers had pass rates of 77% (2012), 78%
(2013), and 74% (2014). The overall pass rates (including first time test takers and re-takers) were 67%, 68%, and 64% respectively. Currently, the 2015 first time test takers pass rates and overall pass rates for The Bar Examination are unavailable.

The CPA exam is scored in four sections: 1) Auditing and Attestation (AUD), 2) Business Environment and Concepts (BEC), 3) Financial Accounting and Reporting (FAR), and 4) Regulation (REG) (American Institute of CPAs, 2015). The 2012, 2013, 2014, and 2015 pass rates for the CPA exam are presented in Table 1.

**Table 1 American Institute of CPA's 2012-2015 Pass Rates**

<table>
<thead>
<tr>
<th>Section</th>
<th>2012 pass rates</th>
<th>2013 pass rates</th>
<th>2014 pass rates</th>
<th>2015 pass rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUD</td>
<td>46.89%</td>
<td>45.87%</td>
<td>46.35%</td>
<td>47.28%</td>
</tr>
<tr>
<td>BEC</td>
<td>52.83%</td>
<td>55.84%</td>
<td>55.46%</td>
<td>56.48%</td>
</tr>
<tr>
<td>FAR</td>
<td>47.97%</td>
<td>48.32%</td>
<td>47.76%</td>
<td>46.75%</td>
</tr>
<tr>
<td>REG</td>
<td>48.15%</td>
<td>48.48%</td>
<td>49.41%</td>
<td>49.43%</td>
</tr>
</tbody>
</table>

While the NCMHCE pass rate of 55-60% is comparable to other professional organizations, there has never been a systematic evaluation of the factors that account for the somewhat low pass rate for the NCMHCE. The purpose of this study is to explore the nature of test anxiety as it relates to the NCMHCE, what changes occur during the course of CETAI administration, and whether the Counseling Exam Test Anxiety Intervention (CETAI) is effective in reducing test anxiety reported by former examinees. The failure rate on the NCMHCE suggests questions about test anxiety from a preventative perspective in terms of how to develop appropriate interventions and curriculum to manage the condition and increase the pass rate.

Highlighting the failure rate should not be misinterpreted as a suggestion that the examination is not accurately discriminating between those who should be in the profession and
those who should not be in the profession, or as a suggestion that the rate of failure produces a poor outcome for the counseling profession especially considering that gatekeeping is an ethical responsibility of counselor educators. The NCMHCE, essentially, serves as an assessment instrument designed to discriminate between those who should be in the profession and those who should not be in the profession, and there may be a number of issues contributing to a test taker being unsuccessful on the NCMHCE. These issues may include lacking the knowledge necessary to prepare for the examination and also individual learning differences such as learning disorders or poor skills in reading and comprehending English as a second language. Many of these issues, however, may be exacerbated because of the confounding factor of high test anxiety.

The extent to which high levels of test anxiety are associated with these high percentages of examination failure on the NCMHCE is unknown, but anecdotal evidence, as well as the proliferation of test preparation assistance workshops and services, suggests that test anxiety is among the significant factors influencing the failure rate of individuals retaking the examination.

Test Anxiety

Test anxiety refers to disabling self-doubt and catastrophic ruminations about impending failure; as well as the distraction and disorganization individuals often experience prior to and during examinations. It also includes the troubling symptoms of autonomic arousal (including sweating, tremulousness, diarrhea, etc.) that are specifically triggered by examinations and/or evaluations of one’s performance (Gibson, 2014). Thus, an individual who experiences high test anxiety feels tension, worry, and upset before, during and after taking tests (Sarason, Pederson, Nyman, 1968).
Although it is not uncommon for evaluative situations to trigger anxiety, those suffering from high test anxiety do not seem to have the adaptive coping skills needed to manage anxiety during an examination. Instead, they often seem to remain in a state of rumination and fear or to respond maladaptively in such a way as to interfere with their own performance (Sarason, Pederson & Nyman, 1968).

According to Wong (2008), test anxiety has been well-established as a multidimensional construct comprised of cognitive, emotional, behavioral, and physiological components. Symptoms of test anxiety may include worry, avoidance, irrational thought patterns, cognitive distortions, negative automatic thoughts, feelings of inadequacy, anticipation of punishment or loss of status, sweating, palpitations, restlessness, and forgetfulness (Sarason, Pederson & Nyman, 1968; Hagtvet & Benson, 1997; Wong, 2008). The repercussions of these symptoms include impaired academic performance such as earning poor grades or failing tests (Sarson, Pederson, & Nyman, 1968).

Test Anxiety & Academic Performance

Sarason and Mandler (1952) began researching test anxiety in the 1950’s particularly in terms of how the construct impedes academic performance. Findings revealed that highly anxious students were more susceptible to test anxiety than students low in anxiety. When test anxiety increased, students made task-irrelevant responses, which led to poor academic performance. However, when a highly test anxious student made task-relevant responses, which lead to positive outcomes such as passing courses and examinations, the behavior was reinforced and proficiency in selecting task relevant responses improved.

Theoretical perspectives on test anxiety

Test anxiety involves the emergence of destabilizing preparedness and performance
symptoms while a person is studying for and taking an examination (Sarason, Pederson & Nyman, 1968). The experience of these symptoms may differ in terms of intensity and in terms of the impact the anxiety has on the academic performance of individuals. Spielberger (1966) explored the findings of Gordon and Sarason (1955) and discovered that: (a) trait anxiety contributes to higher levels of state anxiety, and (b) by emphasizing that the way in which a test taker interprets an anxiety provoking experience will influence the behavior of that test taker in the testing situation.

Spielberger (1966) also suggested that in the testing situation, abilities will be compromised due to information processing deficits triggered by test anxiety. Given the relationship between various presentations of test anxiety (trait, state), maladaptive behaviors that are influenced by cognitive distortions in the testing situation, and the information processing deficits that are experienced as a result of this sequence; the impact test anxiety has on academic performance can be explained by cognitive behavioral, trait state anxiety, and information processing theory.

**Cognitive Behavioral Theory**

Cognitive behavioral theory is a hybrid resulting from a combination of the principles of behavioral theory and cognitive theory (Dobson, 2010). Aaron Beck and Albert Ellis are often credited with the development of cognitive behavioral theory as well as the cognitive behavioral interventions and approaches that have been inspired by the cognitive behavioral theoretical perspective (Dobson, 2010).

In the context of test anxiety, cognitive behavioral theory makes the assumption that tests activate long-term schemata presuming inevitable failure. When a highly test anxious student perceives the testing situation to be threatening and does not perform well, the maladaptive
cognitions of that highly test anxious student are reinforced (Ellis, 1977; Von Der Embse, Berterian & Segool, 2013). Emotional discomfort and behavioral problems can be maintained by maladaptive cognitions (Hofmann, Asnaani, Vonk, Sawyer & Fang, 2012). In terms of test anxiety, maladaptive cognitions can be defined as thinking process disturbances such as worry, and behavioral problems can be defined as poor academic skills and performance (Kondo, 1997).

**Cognitive Behavioral Therapy**

In the treatment of test anxiety, Cognitive Behavioral Therapy (CBT) addresses both the maladaptive cognitions that maintain the condition and the behaviors that result in decreased academic performance. The CBT interventions implemented in the studies that were selected for the Literature Review included muscle relaxation, systematic desensitization, cognitive therapy, rational emotive therapy, and thought records.

**Trait State Anxiety Theory**

Spielberger (1966) offers a conceptualization of anxiety as an emotional state that can be broken into two constructs; trait anxiety (A-Trait) and state anxiety (A-State). Spielberger (1966) suggested that individuals who are high in A-Trait are also highly susceptible to experiencing symptoms of anxiety when they appraise a situation to be one in which fear of failure is activated. Spielberger (2013) explains, “failure or ego-involving instructions evoke higher levels of A-State intensity in high A-Trait subjects than in low A-Trait subjects” (p. 40) and the A-State condition will be influenced by the threat level associated with the level of threat perceived. In the context of test anxiety, trait state anxiety theory makes the assumption that individuals who have higher trait test anxiety might experience higher state test anxiety (Hong, 1998). State test anxiety refers test anxiety in a specific evaluative situation (like during oral exams only, for example) whereas trait test anxiety refers to test anxiety in all evaluative situations (during oral
exams, essay exams, multiple choice tests, etc.). The State Trait Anxiety Inventory (STAI) helps to quantify varying levels of trait and state anxiety therefore providing context for meaningful interventions related to reducing test anxiety.

**Information Processing Theory**

According to McLeod (2008), information processing theory compares human thinking to the multiple functions of a computer processor. This model has three components: sensory register, short-term memory, and long-term memory and the respective corresponding components of the computer are input devices or registers, the CPU, and hard drive storage (Orey, 2001).

McLeod (2008) offers the following model (Figure 1) to conceptualize the information processing system:

![Figure 1 McLeod Information Processing Model](image)

In the context of test anxiety, information processing theory makes the assumption that test anxious students experience difficulty in processing information during examinations as a result of encoding and retrieval impairments. Benjamin, McKeachie, Lin and Holinger (1981) suggested that the challenges associated with processing of information during tests results in performance deficits. Lunsford (2009) offers the following model (Figure 2) to demonstrate the interaction between test anxiety and information processing.

![Figure 2 Lunsford Information Processing Model](image)

Figure 2 shows that when a question is perceived, it is appraised and reappraised for cues to be
used in retrieval at the information processing stage and when successful, is answered. Performance deficits occur when there is a disruption in this sequence. A helpful aspect of this model is that it provides a framework for information processing specifically in the context of the testing situation.

**Statement of Problem**

Although there is an extensive body of literature dedicated to test anxiety in general, there are few studies that examine test anxiety in relation to performance on qualifying examinations in professions that require a license in order to practice. In particular, there are no known studies that examine the impact of test anxiety on examination success associated with the National Clinical Mental Health Counseling Examination (NCMHCE) or with the effectiveness of test preparation assistance interventions such as the Counseling Exam Test Anxiety Intervention (CETAI) on reducing test anxiety.

The extent to which high levels of test anxiety, as opposed to scholastic factors-are associated with these high percentages of examination failure on the NCMHCE is unknown, but anecdotal evidence as well as the proliferation of test preparation assistance workshops and services suggests that test anxiety is among the significant factors influencing the failure rate of individuals retaking the examination.

**Research Questions**

This study will explore the degree to which self-reported test anxiety influences test performance relative to the NCMHCE by attempting to answer three research questions. The first question guiding this investigation will be: What is the nature of test anxiety as it relates to the NCMHCE? And, the second question will be: What changes (if any) occur during the course of intervention administration?
Cognitive behavioral interventions coupled with study skills training have been shown to be effective in reducing test anxiety and increasing academic performance. Taking this into consideration, the third question guiding this investigation will be: To what extent are evidence-based cognitive behavioral interventions coupled with study skills training capable of producing positive outcomes in Masters level post graduates’ performance on the NCMHCE after failing it at least once?

**Significance of the Study**

Individuals that are highly test anxious are especially prone to becoming preoccupied with themselves, their inadequacies, and the impression they makes on others. These preoccupations may interfere with a number of ongoing activities (Sarason, Pederson & Nyman, 1968).

This study makes the first known attempt to examine test anxiety specifically associated with the NCMHCE. Although one of the objectives of this study is to determine how well the Counseling Exam Test Anxiety Intervention (CETAI) has been capable of producing positive outcomes in Masters level graduates’ performance on the NCMHCE, the significance of this study is more extensive due to the impact failing this examination has on test takers.

The NCMHCE is likely to be among the most challenging, stressful, and anxiety provoking tests that will be administered counselors and counselors in training during their professional careers. According to some test takers I have worked with, in addition to suffering from the devastation associated with feeling unable to overcome a significant milestone in their educational journey towards licensure, they also suffer from other issues. According to the participants in this study, the most detrimental implication of failing the NCMHCE is failing to
becoming licensed. Additional implications, however, relate to self-esteem and counselor self-efficacy, counselor identity, and financial stress.

The following paragraphs will address these topics briefly beginning with self-esteem and counselor self-efficacy.

**Self-esteem and counselor self-efficacy**

Self-efficacy impacts the experience of a counselor’s test anxiety (Segool, Von Der Embse, Mata, Gallant, 2014). In addition, counseling professionals who have high test anxiety describe themselves more poorly than those low in test anxiety. In terms of counseling skills and abilities, the self-esteem and self-efficacy of test takers is challenged when the NCMHCE is not passed.

Counselors and counselors in training who fail the NCMHCE begin questioning whether or not their clinical skills are adequate and often start experiencing self-doubt not only in terms of their ability to eventually overcome the examination, but also in terms of overall professional competency. Given that high A-Trait anxiety individuals will perceive situations or circumstances that involve failure or threats to self-esteem as more threatening than those low in A-Trait anxiety, it is possible that the data generated by the sample of test takers examined in this particular study will suggest that they have high Trait Anxiety.

**Counselor identity**

The extent to which counselor identity is negatively impacted by failing the NCMHCE is still unclear. Currently, it is known that test takers who are recent graduates of counseling programs often struggle with wondering whether their Master’s program, Practicum site, Internship site, and Supervisors have sufficiently prepared them for the NCMHCE.

However, many of the test takers who are unsuccessful on the NCMHCE are not recent
graduates, but instead have worked for years with a provisional license and are now required to take the NCMHCE to become Licensed Mental Health Counselors due to new agency or facility regulations. A provisional license allows a Masters-level counseling graduate to practice under supervision until they become licensed themselves (www.counselor-license.com). For the latter population who are not recent graduates, sense of self and counselor identity are challenged as a result of fearing job loss in a field where they previously had a strong sense of belonging and are now competing with counselors who have less experience but credentials that are more desirable.

**Financial burden**

Currently, study programs designed to prepare test takers for the NCMHCE can range from $50 to $400 depending upon the course materials included. In addition, registering for and taking the examination is currently $195 for each attempt (NBCC, 2015). Not only is the expense of studying and registering for the examination financially exhausting, but applying for counseling positions without being licensed can also present financial challenges. The positions open to unlicensed professionals typically offer lower salaries than positions requiring a license. Last, although some facilities offer employees an opportunity to become licensed within a certain time frame, employees often sign a contract agreeing to accept termination if they fail to become licensed within that period of time. Consequently, many test takers may experience seriously detrimental financial challenges if they become unemployed as a result of being unable to pass the examination. The multitude of variables that are revealed when I interview test takers who have failed the NCMHCE are extensive and most certainly contribute to increases in overall levels of anxiety.

**Purpose of Study**

Anecdotal data as well as clinical observations made during administration of the
Counseling Exam Test Anxiety Intervention (CETAI) strongly suggest that test anxiety is associated with the NCMHCE rate of failure among individuals retaking the examination. The purpose of this study is to explore the nature of test anxiety as it relates to the NCMHCE, the changes that occur during CETAI administration, and the extent to which the CETAI has been effective in reducing test anxiety and increasing academic performance among individuals who have failed the NCMHCE at least once.

**Conceptual or Substantive Assumptions**

There are two major assumptions underpinning this study. The first of these is that test anxiety is a major factor influencing the pass rate on the NCMHCE, and the second assumption is that there is an effective systematic intervention that may be employed in order to help individuals manage their test anxiety relative to the NCMHCE.

Three types of test anxiety are assumed to exist among test takers preparing to take the NCMHCE. These three types are: *Normal Test Anxiety*, *Wrong Answer Test Anxiety*, and *Defeated Test Anxiety*.

*Normal Test Anxiety* is the type of anxiety that is typical for anyone who is about to take a very challenging professional examination. It is a transient state, like state anxiety, and does not continue to affect individuals’ thoughts or feelings outside the context of the examination.

*Wrong Answer Test Anxiety* develops on test day when a test taker makes an incorrect answer selection and sees a phrase such as “NOT INDICATED” or “NOT CHOSEN” revealed on the testing computer screen, and their *Normal Test Anxiety* intensifies to the extent that the test taker has a difficult time self-regulating. A unique component of the NCMHCE is that test takers become aware of making a wrong answer selection immediately, as opposed to at the end of the exam. In addition, test takers are aware that a wrong answer selection equates to a
deduction of points ranging anywhere from -1 to -3. Becoming aware of choosing an incorrect answer coupled with a loss of points makes self-regulation difficult because test takers experience cognitive distortions such as “I am failing,” which results in processing and retrieval deficits. This phenomenon may again suggest that this sample of test takers are high in Trait Anxiety given that individuals who are high in A-Trait are also highly susceptible to experiencing symptoms of anxiety when they appraise a situation to be one in which fear of failure is activated (Spielberger, 2013).

*Defeated Test Anxiety* is the type of anxiety that is triggered within test takers after failing the NCMHCE. The test taker feels that there is no hope for them to ever successfully overcome the examination. This sense of hopelessness persists outside of the examination environment and extends to other aspects of the counselor’s life. This phenomenon is supported by the suggestion that highly test anxious students become preoccupied with feelings of inadequacy to the extent that the preoccupation interferes with many ongoing activities (Sarason, Pederson, Nyman, 1968).

The second assumption underpinning this study is that an effective intervention exists for combating the effects of test anxiety among professional counselors who must retake the NCMHCE. This intervention is known as the Counseling Exam Test Anxiety Intervention (CETAI).

**The Counseling Exam Test Anxiety Intervention (CETAI)**

The Counseling Exam Test Anxiety Intervention (CETAI) is a psychoeducational intervention that combines evidence based cognitive behavioral techniques and study skills training in an effort to reduce test anxiety and increase academic performance leading to successful test taking among unsuccessful test takers preparing to retake the NCMHCE. Program
participants become engaged in the CETAI through a computer using collaborative software.

CounselingExam.com is among several well-known NCMHCE test preparation websites. I have been providing one on one tutoring to members of CounselingExam.com preparing for the NCMHCE for over 4 years from 2012 to 2015 (www.counselingexam.com). The tutoring I have provided is guided by the Counseling Exam Test Anxiety Intervention (CETAI), which includes study skills training as well as cognitive behavioral techniques. Study skills training coupled with cognitive behavioral techniques have been demonstrated to produce positive results in terms of decreasing test anxiety and increasing academic performance (Dendato & Diener, 1986).

A lack of knowledge among highly test anxious students has been attributed to inadequate study skills (Kirkland & Hollandsworth, 1979). Upon failing the NCMHCE, test takers have expressed concerns to me about whether or not they studied the correct material as well as how high their levels of anxiety were as they were both preparing for and taking the examination. In regards to study skills training, often, test takers are unaware how instrumental a solid understanding of *The Diagnostic and Statistical Manual of Mental Disorders - 5th Edition* (DSM-5) is in terms of successfully passing the NCMHCE. As a result of this lack of awareness, test takers in this study often struggled with determining which answer selections were most appropriate because they were unfamiliar with the specific diagnostic criteria that corresponded to the mental health symptoms and disorders presented throughout the simulations.

The study skills training component of the Counseling Exam Test Anxiety Intervention (CETAI) includes both increasing knowledge of DSM-5 content and applying that knowledge to simulations in an effort to encourage test takers to approach their practice simulations from a more informed and deliberate perspective. The test preparation site, CounselingExam.com coupled with video-conferencing software (Skype) makes this possible.
In regards to cognitive behavioral interventions, often, test takers do not just experience anxiety in the exam situation, but also while they are studying for the NCMHCE in the first place. For this reason, cognitive behavioral interventions are integrated into the CETAI for purposes of not only managing test anxiety while studying, but also to begin training test takers to employ these techniques during the actual examination. These techniques include deep breathing, guided imagery, and cognitive restructuring.

Unfortunately, failing the examination can contribute to the development of or worsen already present symptoms of test anxiety making the task of even studying for the NCMHCE anxiety producing and aversive in and of itself. The CETAI encompasses tools that address test anxiety associated with the NCMHCE including cognitive behavioral interventions and study skills training. A more detailed description of the capacity in which the CETAI was administered to test takers in this study is provided in the Methods section.

**Conceptual Framework**

Figure 3 illustrates the major concepts that support the CETAI as well as how these concepts are related to each other. Figure 3 also illustrates the progression of Normal Test Anxiety to Wrong Answer Test Anxiety and ultimately Defeated Test Anxiety as well as the cognitions that accompany these transitions.

![Diagram of Conceptual Framework](image)

**Figure 3 Detailed Conceptual Framework Part 1**
Figure 4 Detailed Conceptual Framework Part 2

Figure 4 follows Defeated Test Anxiety and introduces the CETAI. This figure illustrates the CETAI including the combination of Study Skills Training and CBT interventions as well as the cognitions that correspond to these techniques.

Figure 5 Conceptual Framework Overview

Figure 5 illustrates that when a test taker participates in the CETAI after failing the NCMHCE they can successfully pass the examination.

Definitions of Major Terms
Test Anxiety

Test anxiety includes the experience of often disabling self-doubt and catastrophic ruminations about impending failure, distraction and disorganization prior to and during testing, and even troubling symptoms of autonomic arousal (including sweating, tremulousness, diarrhea, etc.) that are specifically triggered by examinations and/or evaluations of one’s performance (Gibson, 2014). Three types of test anxiety are assumed to exist among test takers preparing to take the NCMHCE, which include Normal Test Anxiety, Wrong Answer Test Anxiety, and Defeated Test Anxiety. Normal Test Anxiety is typical and moderately impacts the individual only in testing situations, Wrong Answer Test Anxiety occurs when a test taker becomes aware they have made an incorrect answer selection during the evaluative situation, and Defeated Test Anxiety is triggered by a test taker failing the examination.

Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition (DSM-5)

The DSM-5 provides a taxonomy of mental health disorders and is designed to assist in the reliable diagnosis of these conditions (American Psychiatric Association, 2013). The primary purpose of the DSM-5 is to assist trained clinicians in the diagnosis of their clients’ mental disorders as part of a case formulation assessment that leads to a fully informed treatment plan (American Psychiatric Association, 2013).

National Clinical Mental Health Counseling Examination (NCMHCE)

The NCMHCE is a credentialing examination that includes 10 clinical simulations designed to evaluate “a broad array of clinical competencies beyond merely the recall of isolated facts” (NBCC.org, 2015). All of the simulations are divided into five to eight sections that are categorized as assessing either Information Gathering or Decision Making skills. Passing the NCMHCE is a requirement for counselor licensure in many states as well as for the Certified
Clinical Mental Health Counselor (CCMHC) national certification. In addition, the NCMHCE is one of the examinations used to determine eligibility to work within the military health systems, which involves providing counseling to military service men and women, their families, and veterans (NBCC, 2015). A passing score on this examination is required for counselors wishing to become an LPC, LCPC, LPCC, or LMHC (Licensure Exams Inc, 2015). The examination is administered by computer through Pearson VUE, a testing network with over 250 United States locations (NBCC, 2015). Test takers complete the examination in a private cubicle in a testing room proctored by video cameras. It should be noted that during the process of writing this Proposal, NBCC has stopped administering the exam through AMP. NBCC has since partnered with Pearson VUE, a testing network with over 250 United States locations (NBCC, 2015).

**Counseling Exam Test Anxiety Intervention (CETAI)**

The CETAI is a psychoeducational intervention that combines evidence based cognitive behavioral techniques and study skills training in an effort to reduce test anxiety and increase academic performance leading to successful test taking among unsuccessful test takers retaking the NCMHCE. The intervention is administered remotely via video-conferencing software (Skype).

**CounselingExam.com**

This is a test preparation website for the NCMHCE. The site includes practice quizzes and exams covering all CACREP content areas using multiple choice, case studies, simulations, descriptions, and mnemonics. Diagnostic exams are designed to pinpoint areas for extra study (Licensure Exams Inc, 2015). This test preparation site is considered to be among the best of its kind and is instrumental to the delivery of the CETAI.
Test takers

Test takers are operationally defined as professional counselors and/or counselors in training who have conferred Masters degrees and are eligible for state licensure in Mental Health Counseling.

Test Preparation Instructor (TPI)

The TPI is operationally defined as a professional counselor who administers the CETAI to test takers. In this study, the TPI was myself. I am the primary researcher on this study, a Licensed Mental Health Counselor, and doctoral candidate studying Counselor Education. I have been contributing to the content and providing one on one tutoring to members of CounselingExam.com who are preparing for the NCMHCE for over 4 years (2012 to present) (www.counselingexam.com).

Scope and Delimitation of the Study

This study analyzes a dataset that already exists (archival data) and no new data will be collected. Although highly anxious test takers often request to participate in the CETAI, the data analyzed in this study only corresponds to those test takers who self identified as being highly test anxious and who previously failed the examination at least once. All participants were members of CounselingExam.com and previously used only the test preparation website to prepare for the NCMHCE. Upon failing the examination, these individuals requested to participate in the CETAI for a fee of $50 per hour by each participant.

Although I work with a number of test takers who have diverse needs and skills, this study focuses only on archival data that corresponds to test takers who have hired me for tutoring services after failing the NCMHCE and expressing that test anxiety impacted their ability to successfully pass the examination. The archival data analyzed in this study specifically relates to
expressions of the nature of test anxiety associated with the NCMHCE, the changes experienced through CETAI administration, and academic performance pre and post CETAI. For purposes of this study, academic performance refers to passing and/or failing the NCMHCE.

**Chapter Summary**

Chapter One presented the background for this study including an interpretation of Test Anxiety through the lenses of three different theoretical models as well as a statement of the problem researched, significance of this study, and an explanation of conceptual and substantive assumptions. This chapter also presented a brief description of the intervention implemented to address test anxiety, the study’s conceptual framework, a definition of major terms, and an explanation of the scope and delimitation of this study.

Chapter Two will present a review of literature related to test anxiety and interventions designed to reduce it, and Chapter Three will describe the dataset, participants, and methods of data analysis that will be used in this study.
CHAPTER 2 LITERATURE REVIEW

Overview

This chapter provides a literature review relevant to the objective of this study. Specifically, this chapter examines research related to the conceptualization and treatment of test anxiety using approaches based upon trait-state anxiety, cognitive behavioral, and information processing theoretical approaches. These are the primary approaches, which underpin the CETAI. Therefore, a comprehensive understanding of the literature related to the application of these approaches provides the information necessary to put the current study in context.

Together, these theoretical approaches provide a comprehensive explanation of the complexity of test anxiety that addresses how worry differs from emotionality in the testing situation, evaluates the way in which trait and state anxiety interact, and illustrates how test anxiety relates to both information processing deficits and poor academic performance.

Test Anxiety

Test anxiety can be referred to as evaluative, performance, or situational anxiety (Boslaugh, 2013). Conceptualizations of test anxiety have evolved over time as new research has emerged and advanced knowledge. First, test anxiety was thought to be a symptom of general anxiety expressed in an evaluative situation (Mandler & Sarason, 1952). Then, Liebert and Morris (1967) suggested test anxiety was not necessarily just a symptom of general anxiety, but instead was a unique construct including worry and emotionality specifically associated with testing situations. This opened the door for a number of researchers who have examined the
negative impact worry and emotionality can have on cognitive processes and incidentally, test performance.

Next, Kirkland and Hollandsworth (1979) exposed that not only is test anxiety a unique construct with worry and emotionality properties that impede cognitive abilities resulting in poor academic performance, but highly test anxious students also have inadequate study skills. Spielberger (1972) conceptualized test anxiety as a behavioral problem that is a form of trait anxiety, Sarason (1975) conceptualized test anxiety as primarily a cognitive problem, and Meichenbaum (1977) conceptualized test anxiety as a cognitive behavioral problem. Test anxiety is a complex phenomenon in that cognitive and behavioral elements combined with study skills ability influence academic performance in evaluative situations (Naveh-Benjamin, 1991).

Test anxiety involves the emergence of destabilizing preparedness and performance symptoms while a person is preparing for and taking an examination. The experience of test anxiety symptoms may differ, by person, in terms of intensity and in terms of the impact the anxiety has on the academic performance of individuals. Although it continues to be a focus of clinical research, currently test anxiety has been “well established as a multidimensional construct, involving cognitive, emotional, behavioral, and physiological components” (Wong, 2008, p. 178).

Sarason (1961) suggested exploring academic situations and psychological components that increase anxiety to determine if the conditions of testing situations or anxious students could be modified in such a way to raise academic performance level. This suggestion, coupled with the argument that test anxiety must be taken into account when interpreting academic outcomes and performance (Sarason, 1961) aligns with the overall objective of this study, which is to explore how test anxiety relates to performance on the NCMHCE in an effort to provide test
takers with resources and evidence based tools necessary to manage anxiety, learn the required information, and successfully pass the examination.

Englert and Bertrams (2013) explored the role of self-control strength in the development of state anxiety in test situations from the perspective of trait state anxiety theory. Echoing the research of Liebert and Morris (1967), the authors explained that trait test anxiety consists of a cognitive component called “worry” and an affective component called “emotionality” (Englert & Bertams, 2013, p. 976). Trait state anxiety theory suggests individuals with higher levels of trait anxiety may be more negatively impacted by state anxiety in testing situations, therefore an examination of the impact self-control strength has on state anxiety could offer a new perspective on evidence based test anxiety treatment interventions. Self-control strength can be operationally defined as one’s ability to “control and alter predominant responses and therefore is also of relevance in the self-regulation of emotional states” (Englert & Bertams, 2013, p. 977).

According to the strength model of self-control, self-control is a limited resource, which means that it can be depleted (Baumeister, Vohs & Tice, 2007). “During primary exertion of self-control strength, the resource temporarily depletes and is not readily replenished. Therefore, subsequent self-control demands are not executed effectively” (Englert & Bertams, 2013, p. 977). Humans are both motivated to minimize the uncomfortable state of anxiety and are capable of emotional regulation (Englert & Bartams, 2013). Through their study, Englert and Bertrams (2013) learned that state anxiety increased after an anxiety-provoking test announcement was made and trait test anxiety predicted increases in state anxiety exclusively in students with depleted self-control strength. Therefore, a potential explanation for why individuals continue to suffer from test anxiety relates to the suggestion that changing one’s emotional experiences requires self-control strength. This may be a bigger consideration among individuals retaking an
examination they previously failed.

Also grounded in trait-state anxiety theory, Hong (1998) examined differential stability of individual differences in state and trait test anxiety. Hong (1998) argued that differentiating states from traits could be accomplished by exploring differential stability between the two constructs. It was discovered that trait test anxiety was more stable than state test anxiety, worry was more strongly related to test performance than emotionality, degree of anxiety did not have a strong impact on test performance, and individuals who have higher levels of trait test anxiety may also experience higher levels of state test anxiety (Hong, 1998). Hong (1998) specifically emphasized how worry and emotionality could influence different aspects of test anxiety and performance suggesting that “worry” can be described as a cognitive concern about test taking and performance such as negative expectations and self-evaluation, preoccupation with performance, and potential consequences and that “emotionality” can be described as “perceived physiological reactions, autonomic arousal and somatic reactions to testing situations such as nervousness, discomfort, and tension” (Hong, 1998, p. 2). Hong (1998) argued that worry was linked with test performance, and different interventions would be needed to address the divergent impact that both worry and emotionality have on test anxiety. Cognitive interventions have been found to improve worry, while behavioral interventions have been found to reduce emotionality (Hong, 1998).

Head and Engley (1991) agreed that there is a relationship between trait and state anxiety and suggested that state anxiety is usually low when a task is easy and high when a task is difficult. They (Head & Engley, 1991) reported that regardless of test difficulty, individuals with higher levels of trait anxiety experience higher levels of state anxiety, which is consistent with Spielberger’s (2013) suggestion that individuals with higher levels of trait anxiety may be more
negatively impacted by state anxiety in testing situations.

Cognitive behavioral therapy (CBT) perspective

Benor, Ledger, Toussaint, Hett, & Zaccaro (2009) conducted a pilot study to determine which therapy provided the best approach to treating test anxiety from a choice of three techniques: (a) wholistic hybrid derived from eye movement desensitization and reprocessing and Emotional Freedom Techniques (WHEE), (b) Emotional Freedom Techniques (EFTs) or (c) CBT. An additional goal was to shed light on the rate of change of anxiety over the course of CBT therapy (Benor et al., 2009). The cognitive behavioral interventions employed in this particular study were muscle relaxation with systematic desensitization individualized to each student’s anxieties about their tests (Benor et al., 2009). Findings revealed that WHEE and EFT accomplished in only two sessions what took CBT five sessions to accomplish.

Orbach, Lindsay and Grey (2006) also examined the effectiveness of CBT in the treatment of test anxiety particularly when the interventions were delivered via the Internet. The researchers argued that individuals suffering from test anxiety might have such demanding schedules due to balancing employment and school that pursuing in person treatment for test anxiety is inconvenient. In addition, the researchers suggested the expense of treatment coupled with a scarcity of clinicians is prohibitive and therefore an Internet based intervention might provide a more suitable delivery method for those suffering from test anxiety (Orbach, Lindsay & Grey, 2006).

The computer based CBT modules implemented by Orbach, Lindsay and Grey (2006) included psychoeducation, rational thinking, relaxation, thought records, and systematic desensitization. In the first module, participants were provided psychoeducation about what test anxiety is and what they could expect from the other modules. Applying rational thinking
involved presenting participants with examples of how to appraise negative thoughts so they did not worsen test anxiety and associated symptoms. Relaxation included providing instructions about how to engage in muscle relaxation. Thought records were created by asking participants to record upsetting emotions as they arose along with the context that contributed to the distress, negative thoughts, and evidence that supported or refuted the maladaptive cognitions. Systematic desensitization was accomplished by instructing participants to imagine a test anxiety hierarchy while simultaneously practicing relaxation (Orbach, Lindsay & Grey, 2006).

Findings revealed that computer based CBT was effective in the treatment of test anxiety. Interestingly, although level of test anxiety decreased substantially post-intervention, this had no impact on test takers perception of their problem solving abilities, which draws attention to issues that could be related to self-esteem.

An overarching theme in the literature is that although cognitive behavioral interventions have been successful in reducing test anxiety, these interventions have been inconsistently effective interventions for improving test performance (Dendato & Diener, 1986). Dendato & Diener (1986) called attention to this complex relationship between test anxiety and poor academic performance and concluded that test anxious students have poor study habits, which results in a failure to learn the required material. Given this link between test anxiety and performance deficits, Benjamin, McKeachie, and Holinger (1981) explored information processing theory specifically in terms of both problems related to encoding and organizing information as well as in the retrieval of information in a test situation.

Benjamin, McKeachie, Lin and Holinger (1981) suggested that there are two reasons for poor test performance in anxious test takers. The first is that highly test anxious students make task irrelevant responses (they called “worry responses”). The authors reasoned that high levels
of anxiety produce task-irrelevant responses that compete with and/or interfere with the task-relevant responses that are necessary for good performance in evaluative situations (Benjamin, McKeachie, Lin & Holinger, 1981).

The second reason is that test anxious students have poor ability and study skills. The authors argued that the second contributor to decreased test performance might create even more anxiety. Given that poor ability and poor skills contribute to poor academic performance, some highly test anxious students have good reason to be anxious. Not only does anxiety produce poor performance but also poor ability produces anxiety (Benjamin, McKeachie, Lin & Holinger, 1981). The authors suggest that the problems of highly test anxious students are not all located in one area but more likely lie along a continuum from poor study habits to worry in the test situation. This “taxes their attention so they are not able to retrieve the required information” and supports the strength model of self-control that states self-control is a limited resource that can be depleted (Baumeister, Vohs & Tice, 2007; Benjamin, McKeachie, Lin & Holinger, 1981, p. 817;).

In an effort to further examine this continuum, Benjamin, McKeachie, Lin and Holinger, 1981) conducted two studies. Study 1 focused on problems of test anxious students in information processing and Study 2 specifically focused on the problem of retrieval in test anxious students. Findings in Study 1 revealed that highly test anxious students had poorer grades than less anxious students, performance on each type of question (multiple choice, short answer, and essay) was significantly poorer for highly test anxious students, and highly test anxious students performed better on multiple choice questions than on short answer questions (Benjamin, McKeachie, Lin & Holinger, 1981).

Findings in Study 2 revealed that highly test anxious students had problems with active
retrieval, and “that at least some of the academic disadvantage highly test anxious students showed had to do with problems in learning the information and organizing it rather than solely with retrieval problems in the test situation itself” (Benjamin, McKeachie, Lin & Holinger, 1981, p. 820). The ultimate conclusion drawn from looking at the data produced in Study 1 and Study 2 was that the challenges highly test anxious students experience relate to both the retrieval of information in the test situation as well as encoding of information while studying for the test.

In an effort to further investigate the hypothesis that highly test anxious students experience challenges both during the encoding (learning) phase of information processing as well as the retrieval phase, Naveh-Benjamin, McKeachie and Lin (1987) explored how these information processing deficits impact academic performance in highly test anxious students with poor study skills who have problems in all stages of processing versus highly test anxious students with good study skills who do not have problems in encoding and organizing the information, but who instead have problems in retrieval (Naveh-Benjamin, McKeachie & Lin, 1987). The authors (1987) argued that high levels of test anxiety could result in task-irrelevant responses due to worry, yet interventions to mitigate worry symptoms have shown little effect on academic performance which provided motivation to explore the suitability of the information processing model in explaining the poor academic performance of highly test anxious students. Two studies were conducted. The findings in Study 1 revealed highly test anxious students performed significantly more poorly on performance measures than low test anxious students, and highly test anxious students had significantly poorer cognitive organization of major concepts learned throughout the term compared to low test anxious students (Naveh-Benjamin, McKeachie & Lin). These findings provide additional support for the information processing deficit model suggested for students with high test anxiety, which demonstrates that these
students struggle not only in the context of the evaluative situation, but also beforehand in their organization of the class material (Naveh-Benjamin, McKeachie & Lin, 1987). The purposes of Study 2 were to replicate Study 1 with a different sample (American students) for additional testing of the organization deficit hypothesis as well as to further refine the information processing model of test anxiety (Naveh-Benjamin, McKeachie & Lin, 1987). According to Naveh-Benjamin, McKeachie and Lin (1987), the findings in Study 2 revealed that highly test anxious students performed worse than those with low test anxiety, and students who are highly test anxious had a “more poorly organized conceptual structure” than those with low test anxiety.

Most important, the biggest challenge for highly test anxious students with good study habits is in the evaluative situation itself. In non-evaluative situations, they tend to be successful because they understand the material. However, highly test anxious students with poor study habits do poorly in both non-evaluative and evaluative situations because they do not encode and organize the material well in the first place (Naveh-Benjamin, McKeachie & Lin, 1987). These findings expose the relevance of applying the information processing theory to poor academic performance seen in highly test anxious students and call attention to the fact that cognitive processes are executed differently by test takers. Information processing abilities are impacted by test anxiety, and the extent of this impact is experienced differently by different types of test anxious students. Naveh-Bejnamin (1991) then further analyzed these individual differences in an effort to better understand the true source of test performance deficits.

After concluding that there are different types of test anxious students who demonstrate different types of information processing deficits in testing situations (Naveh-Benjamin, McKeachie & Lin, 1987), Naveh-Benjamin (1991) examined differences in highly test anxious students by specifically assessing how information is organized and retrieved. Although there are
many theories about what contributes to test anxiety and how test anxiety relates to academic performance, Naveh-Benjamin (1991) argued that the question of what truly causes decreased academic performance remains. In an attempt to answer this question, 84 individuals were selected for participation in a study. These participants were divided into two different categories: the poor study habits group, and the good study habits group. Of these two groups, one third was selected from each to receive relaxation & desensitization, study habits training, or no training (control group) (Naveh-Benjamin, 1991). Systematic desensitization involved training in muscle relaxation and visualizing anxiety provoking test situations while practicing relaxation.

Naveh-Benjamin (1991) concluded “test anxiety is manifested by a range of cognitive deficits, starting with the original learning of the information, continuing during organization of the information while reviewing it, and ending with retrieving it on examinations” (p. 138). Results from this study (Naveh-Benjamin, 1991) indicated that highly test anxious students with good study skills do not struggle with learning (encoding and organizing) the information, but do struggle with retrieval as the result of worry. For the highly test anxious students with good study skills, relaxation and desensitization was correlated with increased academic performance. On the other hand, highly test anxious students with poor study skills do struggle with encoding and organizing information. However, “when a training program is applied that improves their learning strategies by enabling them to encode and organize the material better, it can result in a reduction in test anxiety and an improvement in academic performance” (Naveh-Benjamin, 1991, p. 138).

**Conclusions**

Cognitive behavioral interventions coupled with study skills training programs have the
highest level of efficacy in terms of decreasing test anxiety and increasing academic performance of highly test anxious students. For this reason, the findings revealed by Benor et al. (2009) indicating WHEE and EFT may produce positive results in less time than cognitive behavioral interventions is quite an assertion. Given that this assertion was based on results from a Pilot Study, the hypotheses should be further tested to determine if the results can be replicated. Further, future research on the efficacy of WHEE & EFT when compared to cognitive behavioral interventions should provide a clear explanation of how WHEE & EFT differ from theoretically based cognitive behavioral interventions for purposes of demonstrating that new knowledge is truly being generated.

Hong (1998) determined that higher levels of trait anxiety might predict higher levels of state anxiety and there is a stronger relationship between academic performance and worry than academic performance and emotionality. In addition, cognitive interventions alleviate worry, and behavioral interventions alleviate emotionality (Hong, 1998). Englert and Bertrams (2013) enhanced the understanding of the interaction between trait and state anxiety by discovering that trait test anxiety predicted increases in state anxiety only in students who had depleted self-control strength. The general conclusions that can be made based on the studies examining test anxiety though the lens of trait state anxiety theory are that trait anxiety is more stable than state anxiety, individuals who are higher in A-Trait may also be higher in A-State, and self-control strength plays a role in state anxiety.

The information processing theory studies reviewed were presented in chronological order. The rationale for this approach to content organization was based on the fact that the studies examined were all conducted by the same primary researcher with each study being guided by the results from the previous study. Benjamin, Mckeachie, Lin, and Holinger (1981)
took the first step towards understanding deficits in information processing by examining the encoding and retrieval abilities of high, medium, and low test anxious students. It was determined by Benjamin, McKeachie, Lin, and Holinger (1981) that highly test anxious students may not have an adequate grasp of course material. In an effort to further investigate the hypothesis that highly test anxious students experience challenges during the encoding (learning) phase of information processing as well as retrieval phase, Naveh-Benjamin, McKeachie and Lin (1987) explored how these information processing deficits impact academic performance in highly test anxious students with poor study skills versus highly test anxious students with good study skills. It was determined that highly test anxious students with poor study skills experience performance deficits because they not only experience challenges in retrieving information in the evaluation situation, but also when studying the material in the first place. In an effort to better understand how to address the needs of both highly test anxious students with good study skills and highly test anxious students with poor study skills, Naveh Benjamin (1991) implemented training programs designed to address the encoding and retrieval challenges experienced by both types of highly test anxious students.

The culmination of these studies-three studies (McKeachie, Lin, & Holinger, 1981; Naveh-Benjamin, 1991; Naveh-Benjamin, McKeachie & Lin, 1987; established that there are different types of test anxious students, the variation in these students’ academic performance can be linked to good or poor study skills, and when appropriate training programs (relaxation and desensitization for highly test anxious students with good study skills & study skills training for highly test anxious students with poor study skills) are implemented, decreases in test anxiety and increases in academic performance are observed.

Overall, individuals high in A-Trait are more likely to experience high levels of A-State
anxiety. Highly test anxious students with poor study skills experience challenges in all stages of processing whereas highly test anxious students with good study skills experience challenges in the retrieval stage of processing. Interventions that incorporate both cognitive behavioral techniques and study skills training programs produce the greatest outcomes for highly test anxious students. What is particularly intriguing about cognitive behavioral, trait state anxiety, and information processing theory is the way in which the theories compliment one another in the overall understanding of test anxiety as a construct as well as the evidence based treatment interventions that mitigate the condition. Trait state anxiety theory aids in understanding symptoms of test anxiety, information processing theory illustrates how encoding and retrieving information presents challenges due to test anxiety, and cognitive behavioral theory provides a theoretical framework for managing symptoms and increasing academic performance. These three theories help to provide theoretical support for the practices involved in the CETAI.

**Chapter summary**

Chapter two provided a review of literature related to test anxiety as well as the theoretical basis of the practices involved in the CETAI. The following chapter will describe the Methods including the CETAI intervention, the rationale for the study, and the data analysis procedures.
CHAPTER 3 METHODS

Overview

The objective of this study is to explore the degree to which self-reported test anxiety influences test performance relative to the NCMHCE by examining the nature of test anxiety, the changes that occur during administration of the CETAI and the extent which the CETAI, a psychoeducational intervention incorporating cognitive behavioral techniques and study skills training, was capable of producing positive outcomes among highly test anxious Masters level graduates who previously failed the NCMHCE. Archival data collected from Master’s level graduates who participated in the CETAI as a means of preparing to retake the NCMHCE were analyzed in order to address this question.

This chapter describes the CETAI, provides an explanation of how the treatment was delivered, addresses limitations involved in the use of archival data, explains data collection procedures, and describes the sample and dataset that will be analyzed.

Counseling Exam Test Anxiety Intervention (CETAI)

Rationale

Test anxiety is manifested by a “range of cognitive deficits, starting with the original learning of the information, continuing during organization of the information while reviewing it, and ending with retrieving it on examinations” (Naveh-Benjamin, 1991, p. 138). When an intervention is applied that improves highly test anxious students’ learning strategies by enabling them to encode and organize the material better, it could result in a reduction of test anxiety and
an increase in academic performance (Naveh-Benjamin, 1991). A major assumption of this study is that the Counseling Exam Test Anxiety Intervention (CETAI) is effective in this regard.

The CETAI is a psychoeducational intervention that aids in encoding, organizing, and retrieving information in an effort to increase effective test taking performance. This intervention has three primary goals. The first goal is to alleviate test anxiety among participants while they are learning new information by applying study skills training and cognitive behavioral techniques. The second goal is to teach participants anxiety management techniques that can be implemented at periods of heightened anxiety both during intervention administration and during the actual examination in order to promote accurate retrieval. The third goal is for participants to learn cognitive restructuring techniques that can be implemented at critical periods of heightened anxiety both during intervention administration and during the actual examination in an effort to prevent Wrong Answer Test Anxiety.

The TPI administers the CETAI to participants remotely, through video conferencing software that offers a screen-sharing feature (Skype). An individual on the video conferencing call can activate the screen-sharing function, which allows the other member on the video conferencing call to see the computer screen of the individual who activated screen-sharing. The study skills component of the CETAI is implemented through CounselingExam.com. CounselingExam.com is a test preparation site for the NCMHCE and covers all CACREP content areas (Licensure Exams, Inc, 2015).

Participants are asked to: a) share their computer screen with the TPI, b) login to the CounselingExam.com website with their username and password, and then c) open the section of the website that contains practice simulations. These practice simulations mirror the type of real simulations seen on the actual examination. Screen-sharing allows the TPI to watch a test taker
navigate through a simulation to ensure that diagnostic knowledge (DSM-5 information) is being applied appropriately. Video conferencing software combined with screen-sharing functionality also allows the TPI to guide the test taker through the cognitive behavioral components of the CETAI.

**Researcher Biography**

![Researcher Photo](image)

**Figure 6 Researcher Photo**

Alyson Carr is a Licensed Mental Health Counselor, Supervisor, and Counselor Educator. Alyson has worked as an undergraduate psychology instructor and as an instructor for graduate level mental health counseling courses. She has worked for www.CounselingExam.com as a contributor to study materials found on the website as well as a test preparation instructor since February 2012. Since 2014, Alyson has been giving presentations on how to be successful on the NCMHCE at conferences and universities.

**Initial Screening Interview**

The Initial Screening Interview is administered to all individuals interested in receiving the CETAI. The Initial Screening Interview is conducted using the same technological tools that are utilized during administration of the CETAI (Skype video-conferencing and screen-sharing).

The goal of the Initial Screening Interview is to achieve a comprehensive understanding
of the factors that a test taker believes were the most influential in contributing to them being unsuccessful on previous exam attempts. In this particular study, the data analyzed relates only to those test takers who have self-identified as being highly test anxious and have previously failed the examination.

The portion of the Initial Screening Interview that reveals the most information about the test takers decision making and information gathering skills (the two broad areas of assessment on the actual exam) is conducted in two parts: 1) the diagnostic criteria pop-quiz and 2) the uninterrupted simulation completion observation. It is during this phase of the Initial Screening Interview when participants’ knowledge of the DSM-5 is assessed in order to determine the level of study skills training required.

The diagnostic criteria pop quiz is verbal and is administered by the TPI using the following script:

**TPI:** Pretend that a client comes into your office and tells you that they have experienced something horrific. They tell you that the event was horrifying, that they feared for their life/safety and/or the life/safety of someone else. The individual explains they are having nightmares about the traumatic event, and have even avoided stimuli associated with the event. **What disorder does this sound like to you?**

Here, the TPI is describing is either Post Traumatic Stress Disorder (if the duration of symptoms is more than 4 weeks) or Acute Stress Disorder (if the duration of symptoms is less than 4 weeks) depending on the duration of the symptoms. One of the advantages of this particular pop quiz is that is opens the door for a test taker to say, “Well, it would depend on duration – if the symptoms have been present for less than a month, it would be Acute Stress Disorder, but if it were more than a month, it would be Post Traumatic Stress Disorder.”
If a test taker gave a response similar to the example above, it would reveal that the test taker has a relatively solid diagnostic understanding of Post Traumatic Stress Disorder and/or Acute Stress Disorder. If however, a test taker responds to this phase of the pop quiz by saying something along the lines of, “Well, no, it doesn’t really sound like a disorder, I think I would need more information.” This suggests that the test taker is potentially unfamiliar with diagnostic criteria of Post Traumatic Stress Disorder and/or Acute Stress Disorder.

A second question then is asked that follows a similar pattern as the first question but may require a greater depth of diagnostic knowledge:

**TPI:** Imagine that a client comes into your office and tells you that they feel like they have really high highs, and very low lows. The client says that when they are having a high, they feel like they can do anything; this individual has written an entire novel during one of these periods, has a decreased need for sleep, and finds that they talk very rapidly. The client tells you that when they are experiencing a low, they want to sleep all day, don’t have much of an appetite, and feel hopeless, guilty, and sad. The individual reveals that they have never used or abused substances. What disorder does this sound like to you?

Here, the TPI is describing Bipolar 1 Disorder, Bipolar II Disorder, or potentially Cyclothymic Disorder. For the client to meet the criteria for Bipolar 1 Disorder, they must have experienced a Manic or Mixed Episode. For the client to meet the criteria for Bipolar II disorder, they can never have experienced a Manic or Mixed Episode, but rather a Hypomanic Episode. For the client to meet the criteria for Cyclothymic Disorder, they can never have experienced a Major Depressive Episode, Manic Episode, Mixed Episode, or Hypomanic Episode, but rather symptoms of a Major Depressive Episode and symptoms of a Hypomanic Episode that never meet the full criteria for a Major Depressive Episode or Hypomanic Episode.
The second question presented in this phase of the pop quiz allows test takers to showcase their knowledge not only of Bipolar I, Bipolar II, and Cyclothymic Disorder but also the depth of their understanding in terms of Mania, Hypomania, and Major Depression. If a test taker answers this question by saying something such as, “It sounds like it could be Bipolar I, Bipolar II, or Cyclothymic Disorder but I would need to know more information about Mania, Hypomania, and Major Depression,” it would suggest that the test taker is aware of the complex nature of these particular mood disorders. If however, the test taker says something such as, “I need more information before I would be able to formulate a provisional DSM-5 diagnosis,” it would suggest that the test taker is unfamiliar with diagnostic criteria of Bipolar I Disorder, Bipolar II Disorder, Cyclothymic Disorder, or what constitutes a Manic or Hypomanic episode.

Study Skills Training

Study skills training is comprised of three components: DSM-5 knowledge building, applying knowledge appropriately, and implementing an anxiety-reducing test taking strategy. Each of these components will be discussed separately beginning with DSM-5 Knowledge.

**DSM-5 knowledge building**

After the pop quiz is administered, the TPI has a much better assessment of the strength of a test taker’s knowledge of the diagnostic criteria included in the DSM-5. Regardless of how strong or weak a test taker is in this area, this exercise will assist the TPI in terms of developing specific homework assignments catered to the needs of that particular individual. This component of the intervention hinges on mastering diagnostic information as well as applying that knowledge appropriately to practice simulations. Diagnostic criteria homework assignments can vary from test takers being instructed to memorize as many as one to four disorders in the DSM-5 daily until the NCMHCE is retaken.
**Applying knowledge appropriately**

The next step in the Initial Screening Interview is for the TPI to watch a test taker complete an uninterrupted simulation completion observation. It is expected that test takers will explain their thought process as they complete the simulation, thereby giving the TPI a current example of how test takers approach the simulation including why they make specific selections, and not others. This also indicates specific test areas (for example, assessment tools, interventions, or collaborative treatment approaches) that need to be strengthened.

Upon completion of the simulation, the TPI interprets the results of the exercise for the test taker and offers suggestions on how to improve their current strategy. This component of the intervention in study skills training hinges on filling in knowledge gaps related to applying diagnostic knowledge appropriately and addressing specific content areas. If a test taker wishes to strengthen his or her knowledge of a particular content area that is not diagnostic criteria related (for example, ethics, supervision, or group therapy), it is recommended he or she review those particular content areas of CounselingExam.com at their leisure. Content training in this regard (unrelated to DSM-5 knowledge) is not included in the CETAI.

**Implementing an anxiety-reducing test taking strategy**

Recommendations for improvement and a plan for moving forward are made at this step. Although recommendations are made based on the specific needs of each test taker, there are a series of suggestions made to all test takers in order to build knowledge, make informed answer selections, and most importantly, manage test anxiety. These foundational suggestions include the following:

1. **Read through the entire case study at least twice.**
The first time is to get an initial exposure to the content. The second time is to write down diagnostic information (for example, hopelessness, insomnia, or a pattern of unstable interpersonal relationships) and information related to impaired functioning (for example, being late to work, skipping school, or isolating self from friends and family).

*Figure 7 demonstrates how symptoms of diagnostic criteria could be presented.*

*Figure 7 Illustration of diagnostic criteria in a simulation*
**Figure 8** demonstrates how symptoms of impaired functioning could be presented.

*Figure 8 Illustration of impaired functioning in a simulation*

Then, before making any answer selections or even reading the very first section of the simulation, the test taker makes a list of “working diagnoses” that could be plausible given the presenting problems and diagnostic information.
Figure 9 demonstrates what the first section of a simulation can look like. Appropriate working diagnoses in this case would include Specific Phobia, Generalized Anxiety Disorder, and Adjustment Disorder.

Establishing working diagnoses before navigating through the simulation puts the test taker in a position to make deliberate and informed answer selections. Using this approach to navigate through a simulation provides a test taker with a compass that they can continue referring to for direction, which increases confidence and reduces symptoms of test anxiety.

2. **Read through every answer selection before making any selections.**

Not only does this prevent a test taker from making a premature selection, it also slows the test taker down in an effort to keep symptoms of test anxiety mitigated. For many test takers, their anxiety levels are so high that being mindful of deep breathing and going at a slow pace can feel impossible. Until the test taker has had enough exposure to
the CETAI that they are conditioned to read all of the answer selections before making any choices the test taker is encouraged to sit on their hands or place their hands in their laps until they are ready to make answer selections in an effort to slow the test takers pace and facilitate mindfulness.

3. **Make answer selections in order of most confident to least confident.**

Making answer selections in this order encourages a test taker to be thoughtful rather than arbitrary in their selection choices. Further, when a test taker selects their most confident answers first, they are more likely to select correct answers, which increases self-esteem, and helps to manage anxiety.

**Cognitive behavioral interventions (deep breathing & guided imagery)**

4. **Take deep breaths in between each section of the simulation.**

Encouraging deep breathing in between sections aids in managing test anxiety symptoms.

5. **Take a deep breath whenever you see you have made an incorrect answer selection.** This helps highly anxious test takers stay calm and focused in the face of the fear of failure associated with evaluative situations.
Figure 10 demonstrates what making an incorrect answer selection can look like.

<table>
<thead>
<tr>
<th>Simulation: ely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ely is a 38-year-old male who comes to your office after his discharge from the psychiatric hospital for an attempted suicide. Ely has been on medication for his depressive symptoms since the age of 14 and periodically decides that he no longer needs to take medication. Ely has difficulty maintaining employment, relationships, and housing as a result of his illness. Presently, Ely is homeless and staying at a local shelter where he has been in several fights with other residents. Due to this aggression, he may be asked to leave the evening when he returns to the shelter.</td>
</tr>
</tbody>
</table>

**Section A (Information Gathering)**

What data might you gather during/within to make a DSM-5 diagnosis?

1. Where is Ely's family?  
   Get feedback  
   NOT CASERS. This information is needed as a psychosocial evaluation but not for your diagnosis.

2. What is his educational background?  
   Get feedback

3. Does he have a substance use history?  
   Get feedback

4. Does Ely have periods of elevated mood or mania?  
   Get feedback

5. Does Ely have any contact with his parents?  
   Get feedback  
   NOT CASERS. This information is important, but it is not needed for your diagnosis.

6. How often does Ely become aggressive or angry?  
   Get feedback

**Figure 10 Incorrect answer selections in simulation**

6. **Practice deep breathing in conjunction with guided imagery in between every simulation.** This is helpful for not only breaking up the simulations that tend to blur together after an extended period of testing, but also because this type of relaxation training helps to manage test anxiety.

**Cognitive Restructuring**

7. **Remember that you will make incorrect answer selections on test day, and you can still pass.**

   This attempt at cognitive restructuring is designed to normalize making incorrect answer selections and combat *Wrong Answer Test Anxiety*. If a test taker can cognitively recognize and accept that it is highly unlikely they will pass the NCMHCE *without* making incorrect answer selections, the power is taken away from incorrect answer
selections and instead is seen as “par for the course.” This cognitive restructuring tool directly corresponds to the theoretical assumption that cognitive activity affects behavior.

8. **Recognize when you make incorrect answer selections and still pass on practice simulations.**

Encouraging test takers to acknowledge that they are able to pass practice simulations when they make incorrect answer selections can be empowering because in many ways, by passing, test takers prove themselves wrong about their certainty they will fail due to a wrong answer selection. This cognitive restructuring tool directly corresponds to the theoretical assumption that cognitive activity may be monitored and altered and desired behavioral changes may be effected through cognitive change.

**CETAI procedures Summary**

The Initial Screening Interview is administered to explore the reasons the test taker believes they did not successfully pass the examination as well as evaluate the proficiency of the test takers DSM-5 knowledge. Cognitive behavioral techniques coupled with study skills training are instrumental to the CETAI. Cognitive behavioral techniques include deep breathing, guided imagery, and cognitive restructuring. Study skills training include DSM-5 knowledge building and applying that knowledge appropriately in practice simulations with the guidance of the TPI.

This section included a description of the CETAI and its methods and procedures. The following section provides a description of the sample, data collection sources and procedures, as well as addresses the limitations associated with analyzing archival data.

**Description of Sample**

Although highly test anxious test takers often request to participate in the CETAI, the only data analyzed in this study corresponds to those test takers who have self-identified as being
highly test anxious and have previously failed the examination (re-takers). The total sample population consists of approximately 70 participants over 4 years. This number will be solidified pending Institutional Review Board approval.

The information, which now serves as the data source for this study resulted from the typical electronic mail correspondence that routinely occurs between test takers and myself. This electronic mail correspondence does not include conversations specifically about demographic information including location, age, or work setting. However, test takers often voluntarily share this information during administration of the CETAI. Given that none of this information was deliberately collected and tracked, it may be excluded from data analysis. Demographic information related specifically to gender, however, will be included. A designation of “Male” or Female” was assigned based on the name of the test taker as well as the physical presentation revealed through video-conferencing software. The administration of the CETAI is accomplished remotely which means the test takers in this sample are located across the United States. These participants come from various backgrounds and a number of them have held multiple counseling positions throughout their careers before attempting to take the NCMHCE.

Data Sources

Qualitative

The primary data, which will be used in this study, were collected by me via electronic communication between test takers and myself. Although there is frequent supportive electronic correspondence between test takers and I, the data in this study that will undergo qualitative analysis are specific to correspondence related to re-takers self-identifying as being highly test anxious or describing the nature of test anxiety symptoms when preparing for or taking the NCMHCE.
Quantitative

Some numerical data were tracked through electronic records that revealed when a test taker had attempted to take the NCMHCE after receiving the CETAI. These electronic records indicate that the participant: a) paid for and received the CETAI and b) attempted the NCMHCE after receiving the CETAI. Payment records were stored in an online payment system (PayPal) and attempt records post intervention were voluntarily provided by test takers via electronic communication. These data were essential to determining test performance outcomes (whether the participant passed or failed when they retook the NCMHCE post CETAI.

Data Collection Procedures

The primary source of the data used in this study is the email correspondence that occurred between test takers and myself during the years 2012 through 2015. During this time period I have received hundreds of emails related to the NCMHCE. From this group of emails, I will select correspondence from only those test takers who self-identified as being highly test anxious, who previously failed the examination, and who participated in the intervention.

I will accomplish this by reviewing the history of payments received by each individual test taker that hired me for administration of the CETAI over the last three years via PayPal payment history reports. I will take the name of each email address associated with making PayPal payments and conduct a search in my email inbox for that test takers email address. I will then conduct a specific search in my email inbox for all correspondence between myself and the test taker who paid for and received the CETAI. I will make a note of those individuals who self-identified as being highly test anxious during the Initial Screening Interview, I will review the threads of emails between each test taker and myself to identify any written expression related to test anxiety, and I will analyze the emails that contain voluntary information provided by test
takers regarding whether they passed or failed the NCMHCE following administration of the CETAI. All of the emails will be recorded and organized in a word document that can be printed, coded, and analyzed. This hard copy will allow the auditor to see the information I used to determine who would and who would not be included in the study. To ensure that the confidentiality of participants is protected, I will replace all names with a letter and number: an M or F will be used to indicate male or female, and a participant number will follow the M or F (e.g., M1 for the first male participant or F6 for the sixth participant).

**Limitations involved in the use of archival data**

Archival data can include a wide variety of empirical materials created by individuals for their own purposes (Fischer & Parmentier, 2010). Examples of these materials can include diaries, letters, photographs, advertisements, magazine articles, etc. Archival data is considered to be another source of evidence based upon documents relating to institutions, governments, individuals, and other groups (Shaughnessey, Zechmeister & Zechmeister, 2002). Archival data can be used exclusively or in conjunction with other research methods (Shaughnessey, Zechmeister & Zechmeister, 2002). Because statistical inferences using quantitative data typically use population or randomization modeling and the collection of archival data does not conform with either of these models, this type of data collection is sometimes considered problematic (Curran-Everett & Milgrom, 2013).

This current study, however, was not designed to be a controlled study, and no comparative data will be analyzed as in an experimental or quasi-experimental design. This study will be primarily descriptive and qualitative in nature, and no variables will be controlled or manipulated. The goals of this study are to better understand the nature of test anxiety as well as how the CETAI functions to reduce test anxiety and subsequently increase test performance.
among a group of self-identified highly anxious test takers who previously failed the NCMHCE. For this reason, the greatest threats to this study relate to my interpretation of the data.

The following chapters include the results and discussion about the quantitative and qualitative findings revealed during data analysis, limitations, recommendations for future research, implications for future research, and conclusions.
CHAPTER 4 RESULTS

Qualitative Results

Test anxiety includes the experience of often disabling self-doubt and catastrophic ruminations about impending failure, distraction and disorganization prior to and during testing, and even troubling symptoms of autonomic arousal that are specifically triggered by examinations and/or evaluations of one’s performance (Gibson, 2014). Test anxiety is manifested by a “range of cognitive deficits, starting with the original learning of the information, continuing during organization of the information while reviewing it, and ending with retrieving it on examinations” (Naveh-Benjamin, 1991, p. 138).

When an intervention is applied that improves highly test anxious students’ learning strategies by enabling them to encode and organize the material better, it could result in a reduction of test anxiety and an increase in academic performance (Naveh-Benjamin, 1991). A major assumption of this study is that the CETAI is effective in this regard. The CETAI is a psychoeducational intervention that combines evidence based cognitive behavioral techniques and study skills training in an effort to reduce test anxiety and increase academic performance leading to successful test taking among unsuccessful test takers preparing to retake the NCMHCE.

The cognitive behavioral techniques incorporated into the CETAI include deep breathing, guided imagery, and cognitive restructuring. The study skills training incorporated into the CETAI includes DSM-5 knowledge building, applying knowledge appropriately, and implementing an anxiety reducing strategy.
Through the analysis of qualitative data, this section provides a narrative demonstration of the lifecycle for a highly test anxious NCMHCE re-taker. This lifecycle illustrates the relationship between feeling test anxious during the testing situation, identifying as a poor test taker, making incorrect answer selections on the NCMHCE as a result of information processing impairment, failing the NCMHCE as a result of making incorrect answer selections, feeling defeated as a result of failing the NCMHCE, experiencing a decrease in confidence as a result of feeling defeated, and then requesting the CETAI. According to the qualitative data, the next phase of the lifecycle for a highly test anxious NCMHCE re-taker indicates that when participants apply the skills learned in the CETAI they earn higher scores on practice tests, gain confidence, and the majority of them successfully pass the NCMHCE.

**Research Question One: What is the nature of test anxiety as it relates to the NCMHCE?**

*Feeling test anxious*

Symptoms of test anxiety were described by participants in the following ways:

**Table 2 Test anxiety**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F4</td>
<td>I took the LCPC exam twice- the first time I really didn’t have any anxiety until my computer froze for 20 minutes until the service center fixed it. While I was waiting I saw a gentleman taking the same exam I took and was done in 2 hours. I still had 2 hours to go and then I went into panic mode. I did not pass the first exam and missed it by 11 points in the Decision portion.</td>
<td>Pass</td>
</tr>
<tr>
<td>F10</td>
<td>I am still having difficulty with concentrating on my exam prep. One of my, since I failed the exam the first time, primary issues is just doing the simulations causes me to begin experiencing panic attacks.</td>
<td>Fail</td>
</tr>
<tr>
<td>F10</td>
<td>As for today, I haven't done the practice test due to bunch of valid but still excuses (yes, I am starting to panic a little bit for I am beginning to not feel prepared)</td>
<td>Fail</td>
</tr>
</tbody>
</table>
Highly test anxious students with poor study skills experience challenges in all stages of information processing whereas highly test anxious students with good study skills experience challenges only in the retrieval stage of processing.

**Poor study skills**

Participants in this sample self-identified as being highly test anxious with poor study skills via electronic communication:

**Table 2 Test anxiety (Continued)**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F14</td>
<td>JUST got home and failed AGAIN. Was shaking during the test. Took breaks and really thought i had passed, I left 40 points on the table in decision making. Truly, I was beside myself leaving the exam. I had a full blown panic attack, pulled over, and dealt with myself. Upon getting home, I took a Xanax to calm down.</td>
<td>Fail</td>
</tr>
<tr>
<td>F17</td>
<td>Yes, I think there was some anxiety. Honestly, I didn't realize how much anxiety and stress cause my tension headaches,</td>
<td>Fail</td>
</tr>
<tr>
<td>F19</td>
<td>Im sorry. I overslept I haven't slept in days... Last night the first! I've been so stressed. With evidence of tmj - wrists - can we reschedule.</td>
<td>Pass</td>
</tr>
<tr>
<td>F8</td>
<td>[When she failed 7th time] I really felt I was doing good but I guess my nerves got the best of me</td>
<td>Fail</td>
</tr>
<tr>
<td>M8</td>
<td>I get anxiety spikes sometimes that keep me up in the night. I've been trying to kind of stay distracted.</td>
<td>Pass</td>
</tr>
</tbody>
</table>

**Table 3 Poor study skills**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F4</td>
<td>I retook the LCPC exam again in Feb of this year and I did have anxiety especially when I had a whole section of group counseling that I did not expect and I guessed my answers through! I did not pass the second exam and missed it by 5 points in the Decision portion. I never thought I was a poor test taker but maybe I am</td>
<td>Pass</td>
</tr>
</tbody>
</table>
Table 3 Poor study skills (Continued)

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F6</td>
<td>I am horrible at testing and would like to make this time a pass.</td>
<td>Pass</td>
</tr>
<tr>
<td>F19</td>
<td>I believe I have very bad test taking skills and full of anxiety when I sit for an exam.</td>
<td>Pass</td>
</tr>
<tr>
<td>F19</td>
<td>However, I admit again I am a horrible test taker (I know I shouldn't say that!) I study minimum 3 hrs a day.</td>
<td>Pass</td>
</tr>
</tbody>
</table>

Making incorrect answer selections on the NCMHCE as a result of information processing impairment

As a result of test anxiety coupled with possible poor study skills, information processing deficits can occur. Some test takers have described these deficits in terms of misinterpreting or misreading information:

Table 4 Misinterpreting/misreading

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2</td>
<td>I'm consistently misinterpreting some of the questions, especially for IG for Axis 1 and Axis 2. On the exam, my major mistake was doubting my sufficient responses, over analyzing, and adding when I should have stopped.</td>
<td>Pass</td>
</tr>
<tr>
<td>F6</td>
<td>I am looking for guidance on testing taking strategies to help with this exam. Tips or skills you would suggest. Overall, I find I have a tough time reading the questions and choices correctly.</td>
<td>Pass</td>
</tr>
<tr>
<td>F10</td>
<td>I failed by one question &amp; I know the question. I misread rule out and panicked &amp; started clicking. Right now I feel so stupid and worthless. Thank you for all of your help. [failed NCMHCE post CETAI]</td>
<td>Fail</td>
</tr>
<tr>
<td>F19</td>
<td>I will pick an answer it will be wrong, I will go back and say I KNEW THAT! I either misread or wasn't thinking clearly.</td>
<td>Pass</td>
</tr>
<tr>
<td>F23</td>
<td>Sorry I didn't see you said next week at the bottom of this email, that is one of my problems, I don't read everything.</td>
<td>Pass</td>
</tr>
</tbody>
</table>
Wrong answer test anxiety

When information processing deficits occur and incorrect answer selections are made, test takers experience *Wrong Answer Test Anxiety*. *Wrong Answer Test Anxiety* is triggered by becoming aware of making an incorrect answer selection during the evaluative situation. When this occurs, *Normal Test Anxiety* intensifies to the extent that the test taker has a difficult time self-regulating. As a result of test takers knowing when they have made an incorrect answer selection in real time, this stimuli can contribute to cognitive distortions or irrational and self-defeating thoughts such as “I am failing,” which further contributes to information processing and retrieval deficits. One objective of the CETAI is for participants to learn cognitive restructuring techniques that can be implemented at critical periods of heightened anxiety both during intervention administration and during the actual examination in an effort to prevent *Wrong Answer Test Anxiety* (see Figure 3).

*Wrong Answer Test Anxiety* has been described in the following ways and also appears in the CONFIDENCE LOST theme section:

**Table 5 Wrong Answer Test Anxiety**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F4</td>
<td>I mentioned that I had a little difficulty in taking the exam via computer when I accidently sneezed and hit the wrong key- I did that twice and then my anxiety hit the roof because they were wrong answers?</td>
<td>Pass</td>
</tr>
<tr>
<td>F16</td>
<td>I feel anxious when putting an answer because I think is not going to be the write one. I need to know what they are looking for when they ask the question.</td>
<td>Fail</td>
</tr>
</tbody>
</table>

As previously illustrated in the Conceptual Framework (see Figure 3), the final stage of anxiety in the lifecycle is *Defeated Test Anxiety*. *Defeated Test Anxiety* is triggered within test
takers after failing the NCMHCE. When this occurs, the test taker feels that there is no hope for them to ever successfully overcome the examination. This sense of hopelessness persists outside of the examination environment and extends to other aspects of the counselor’s life. The relationship between feeling anxious, making wrong answer choices, failing the NCMHCE, and feeling defeated aligns with Baumeister, Vohs & Tice’s (2007) theory that self-control strength is a limited resource and can be depleted.

**Feeling defeated as a result of failing the NCMHCE**

Some test takers describe their defeat in terms of being discouraged or wanting to give up:

**Table 6 Discouraged**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F16</td>
<td>I got really frustrated when I kept hitting &quot;Not indicated,&quot; that I just gave up on the last three simulations.</td>
<td>Fail</td>
</tr>
<tr>
<td>F12</td>
<td>As for our last session, I apologize if I got upset and discouraged.</td>
<td>Fail</td>
</tr>
<tr>
<td>F1</td>
<td>I’m really hoping that you will also help me prepare differently this time. I have been studying for 6 months &amp; at a very intense level, practically everyday for 2+ hours. Today, I’m a little discouraged and concerned about having that same level of intensity. I guess I want to study smarter, not harder…..</td>
<td>Pass</td>
</tr>
<tr>
<td>F2</td>
<td>Ugh, I'm feeling quite discouraged as I failed 6 out of 7 Simulations 4. I just booked my exam for Oct 12 and am now questioning my readiness.</td>
<td>Pass</td>
</tr>
<tr>
<td>F11</td>
<td>Failing is very discouraging;</td>
<td>Pass</td>
</tr>
<tr>
<td>F15</td>
<td>Feeling defeated but somehow I'm just numb this time. Not really sure how I'm feeling or what to do.</td>
<td>Pass</td>
</tr>
<tr>
<td>F17</td>
<td>I just feel so beat by everything and thanks for caring.</td>
<td>Fail</td>
</tr>
<tr>
<td>F8</td>
<td>I have studied so much and have taken the test so many times that I don't understand where and what I am doing wrong.</td>
<td>Fail</td>
</tr>
</tbody>
</table>
Table 6 Discouraged (Continued)

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F12</td>
<td>This is not the first time I have had to experience disappointment or failure, years and years of retaking standardized exams because I cannot pass - but I never give up. Although this time, the thought of waiting three more months, breaks my heart. I really was confident that this would be the last time.</td>
<td>Fail</td>
</tr>
</tbody>
</table>

Table 7 Giving up

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F4</td>
<td>I really felt confident that I passed it this time. I think I’m giving up and I wonder how many people do and never go for their LCPC</td>
<td>Pass</td>
</tr>
<tr>
<td>M4</td>
<td>[in email titled “discouraged”] Ok, I am giving up tonight !!!!!!!</td>
<td>Pass</td>
</tr>
<tr>
<td>F15</td>
<td>I just dont know what to do anymore. Trying real hard not ti just give up as tears of incompetence are rolling down my face for the third time. I was thinking maybe Im one of those people thats not suppose to have this. It really makes your heart heavy when you talk to people that passed the first maybe second time. This time was my third. At a complete loss.</td>
<td>Pass</td>
</tr>
</tbody>
</table>

Experiencing a decrease in confidence as a result of feeling defeated

The feeling of defeat that occurs as a result of failing the NCMHCE contributes to re-takers experiencing a decrease in confidence. A decrease in confidence was described in the following ways:

Table 8 Confidence lost

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F12</td>
<td>I was going to either sign up for May 16th but I am not thinking June 5th and was hoping that maybe you had 1-2 sessions open before June 5th to build my confidence again :)</td>
<td>Fail</td>
</tr>
</tbody>
</table>
Table 8 Confidence lost (Continued)

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F11</td>
<td>I can't lie, before taking the practice exam I felt confident; however, when I reviewed my responses and seen the things I missed it kind of brought my confidence level down a bit.</td>
<td>Pass</td>
</tr>
<tr>
<td>F15</td>
<td>I read too much into the questions and I often get scared that Im losing points when I see &quot;NOT INDICATED&quot; and start to loose confidence.</td>
<td>Pass</td>
</tr>
<tr>
<td>F15</td>
<td>When I see Not Indicated, I get nervous and it goes down hill from there. I start losing confidence so to speak and I feel like ok, well I answered too many wrong by now so I know I didnt pass</td>
<td>Pass</td>
</tr>
<tr>
<td>F17</td>
<td>I think your new approach is great and will help with confidence!</td>
<td>Fail</td>
</tr>
</tbody>
</table>

It is typically after a re-taker experiences a decrease in confidence as a result of Defeated Test Anxiety that they inquire about receiving the CETAI. The CETAI is a psychoeducational intervention that aids in encoding, organizing, and retrieving information in an effort to increase test taking performance. This intervention has three primary goals. The first goal is to alleviate test anxiety among participants while they are learning new information by applying study skills training and cognitive behavioral techniques. The second goal is to teach participants anxiety management techniques that can be implemented at periods of heightened anxiety both during intervention administration and during the actual examination in order to promote accurate retrieval. The third goal is for participants to learn cognitive restructuring techniques that can be implemented at critical periods of heightened anxiety both during intervention administration and during the actual examination in an effort to prevent Wrong Answer Test Anxiety. The data illustrates that in pursuance of these goals, when re-takers apply the skills learned in the CETAI, they can earn higher scores on practice tests (see Appendix A and Appendix B for score tracking sheets), gain confidence, and successfully pass the NCMHCE (see Figure 5).
Research Question Two: What changes (if any) occur during intervention administration?

On applying CETAI during practice simulations

Table 9 Applying techniques during practice simulations

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3</td>
<td>I passed both the IG DM on simulation 4... I focus and slowed down, taking a breath reading twice.</td>
<td>Pass</td>
</tr>
<tr>
<td>F7</td>
<td>I took a deep breath, reminded myself that I know what I am doing. I feel everything you taught me was right one the money. I read it twice.</td>
<td>Pass</td>
</tr>
<tr>
<td>F10</td>
<td>I felt my self start to panic for I missed a few in a row. So I took a quick break as you suggested and got control of myself. Here are the results: Type Your Score Passing Score Result Decision Making 28 27(74% of 37) Pass Information Gathering 23 19 (71% of 27) Pass I was very surprised to see this for I was sure I had failed it when I missed those responses. Your techniques definitely help--now I just have to remember to apply them instead of letting the panic take over.</td>
<td>Fail</td>
</tr>
<tr>
<td>F10</td>
<td>After the second scenario, I just knew I was going to fail and I started to rush along with clicking repeatedly and the panic attack was coming on strong. BUT, I realized what was happening about the 5th one and I STOPPED! I got up, walked around a little bit, got some water and said the &quot;Serenity Prayer&quot; a few times and remembered although I would be sad that I failed the actual exam that my Higher Power, my family and friends and you will stick with me no matter what happens. All the things that I would be allowed to do during the actual test. Once I calmed down and kept saying the prayer, I still knew that I was going to fail and was a little anxious but I knew I could accept it and keep practicing. [when taking practice exam #2]</td>
<td>Fail</td>
</tr>
<tr>
<td>F24</td>
<td>I felt really comfortable and even though I was a little anxious I made sure I read through everything and didn't make any careless mistakes</td>
<td>Pass</td>
</tr>
</tbody>
</table>
### Table 9: Applying techniques during practice simulations (Continued)

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F22</td>
<td>I felt pretty good during the test and I just kept remembering what You told me about reading the question completely twice before selecting and so I got in that habit and that was good</td>
<td>Pass</td>
</tr>
</tbody>
</table>

**On confidence gained**

### Table 10: Confidence gained

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
<th>Post intervention results</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2</td>
<td>I am feeling much more confident and am looking forward to what is hopefully our final session tomorrow, as I decided to take the exam on Friday, as scheduled, and am planning to pass!</td>
<td>Pass</td>
</tr>
<tr>
<td>M2</td>
<td>Yes, I feel like the world as been lifted off my shoulders. Working with you provided me the confidence I needed to take the exam. You are a great communicator and excellent at simplifying the material. THAT IS HUGE. When I read the scenarios I knew I only need to look for key phrases to help me diagnosis the client. However, it sounds easier then done. You were able to help me get to the next level and hone in on the key words and phrases.</td>
<td>Pass</td>
</tr>
<tr>
<td>F9</td>
<td>my confidence was there and no anxiety (I used lots self talk, positive affirmations and got to the site 30mins early to relax first). I also had less coffee than usual.</td>
<td>Pass</td>
</tr>
<tr>
<td>F10</td>
<td>I do not want to get a head of myself but I am feeling more confident as I go through each day. I utilized the coping strategies completely and here are the results [after passing practice exam # 2]</td>
<td>Fail</td>
</tr>
</tbody>
</table>

**On successfully passing the NCMHCE post CETAI**

### Table 11: Passing

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>I am still on cloud nine, feeling blessed, happy, and relieved. This is a wonderful experience and I am so grateful.</td>
</tr>
<tr>
<td>F2</td>
<td>Passed! Thanks so much for contributing to my success!</td>
</tr>
<tr>
<td>F5</td>
<td>I just wanted to share that I passed my test!</td>
</tr>
<tr>
<td>F6</td>
<td>Passed. Ahhh</td>
</tr>
<tr>
<td>F7</td>
<td>Aly, I passed my test....Yippee. I am so happy.</td>
</tr>
</tbody>
</table>
Table 11 Passing (Continued)

<table>
<thead>
<tr>
<th>Participant</th>
<th>Archival data (collected from email correspondence)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M8</td>
<td>I passed I passed I passed!!!! I got my life back and I have you to thank! This is the best day I've had in a long time!!! Freedom! I thank you from the bottom of my heart and I desire to stay in contact via social media and/or whatever. I want to party!!!!</td>
</tr>
<tr>
<td>M5</td>
<td>It went great! I passed! Celebrating in España at the moment...thanks for all the support and help! 😊</td>
</tr>
<tr>
<td>F9</td>
<td>I did it!!!!! Finally</td>
</tr>
<tr>
<td>F11</td>
<td>Aly, I PASSED!!!!!!!!!!! Thank you soooooo much for EVERYTHING! You're techniques really helped! I took a break about 50 times!</td>
</tr>
<tr>
<td>M9</td>
<td>I'm happy to report that I passed both sections. I feel good about my performance!!</td>
</tr>
<tr>
<td>F18</td>
<td>I passed. Thanks for your assistance as it certainly helped me.</td>
</tr>
<tr>
<td>F19</td>
<td>I PASSED!!!!!!!! YES!! It is over! The whole thing so stressful. So happy I pushed through. My husband is pretty amazed I didn't give up. So If I can do it, anyone can! You are a blessing... and very encouraging the whole time.</td>
</tr>
<tr>
<td>F21</td>
<td>Exam is complete - I passed!</td>
</tr>
<tr>
<td>F22</td>
<td>I PASSED MY EXAM!!!! 83% in IG AND 77% in DM</td>
</tr>
<tr>
<td>M2</td>
<td>So anyways the exam took me 2:45 to complete and I PASSED. Thank you for the help and support you provided me. It really made a difference.</td>
</tr>
</tbody>
</table>

Quantitative Results

Research Question Three: To what extent are evidence-based cognitive behavioral interventions coupled with study skills training capable of producing positive outcomes in Masters level post graduates’ performance on the NCMHCE after failing it at least once?

There were 33 NCMHCE re-takers included in this study (24 females, 9 males). After receiving the CETAI, 25 re-takers (75.75%) successfully passed the NCMHCE, and 8 re-takers (24.24%) failed the NCMHCE. Of the 33 participants included, 4 participants made two exam attempts post intervention before passing the NCMHCE, and 1 participant made three exam attempts post intervention before passing the NCMHCE.
Figure 11 *NCMHCE attempts Pre-CETAI*

Figure 12 *NCMHCE attempts Post-CETAI*
CHAPTER 5 DISCUSSION

Introduction

This study explored the degree to which self-reported test anxiety influences test performance relative to the NCMHCE by attempting to answer three research questions. The first question was: What is the nature of test anxiety as it relates to the NCMHCE? And, the second question was: What changes (if any) occur during the course of intervention administration?

Cognitive behavioral interventions coupled with study skills training have been shown to be effective in reducing test anxiety and increasing academic performance. Taking this into consideration, the third research question was: To what extent are evidence-based cognitive behavioral interventions coupled with study skills training capable of producing positive outcomes in Masters level post graduates’ performance on the NCMHCE after failing it at least once?

There were two major assumptions underpinning this study. The first of these was that test anxiety is a major factor influencing the pass rate on the NCMHCE, and the second assumption was that there is an effective systematic intervention that may be employed in order to help individuals manage their test anxiety relative to the NCMHCE. To address these research questions, archival data collected from counselors and counselors in training who participated in the CETAI as a means of preparing to retake the NCMHCE were analyzed.

There were 33 participants (24 females, 9 males) included in this study who attempted the NCMHCE from one to six times prior to receiving the CETAI. Although I initially thought
there would be approximately 70 participants in this study, many were eliminated because they did not meet the inclusion criteria of previously failing the NCMHCE at least once. The primary source of the data used in this study was the email correspondence that occurred between participants and myself during the years 2012 through 2015. The qualitative archival data used in this study was collected by me via electronic communication between participants and myself, and the results on the NCMHCE (Pass or Fail) following administration of the CETAI were voluntarily provided by participants.

This chapter contains four sections. The first section provides a discussion of the general findings. The second section addresses the limitations of this study. The third section includes implications for counselors and counselor educations and the fourth section provides a conclusion.

**Discussion**

From a quantitative perspective, when highly test anxious NCMHCE re-takers receive the CETAI, the majority of them successfully pass the exam. From a qualitative perspective, ten major themes were identified in the email correspondence between myself and test takers including *Test anxiety, Poor study skills, Misinterpreting/Misreading, Wrong answer test anxiety, Discouragement, Giving up, Confidence lost, Application of techniques, Confidence gained, and Passing the NCMHCE*. This discussion will address what was captured, as well as what was not captured by email communication.
Research Question One: What is the nature of test anxiety as it relates to the NCMHCE?

Test anxiety

Every individual who failed the NCMHCE and requested the CETAI expressed feeling test anxious. In other words, there was not one participant who failed the NCMHCE and expressed not feeling anxious which presents a number of questions including those related to the true source of test anxiety. For example, did re-takers fail the NCMHCE in the first place because of test anxiety? Or, do re-takers experience test anxiety because of failing the NCMHCE? Administering a test anxiety measure pre-intervention could shed light on this as well as be used to gather additional information about study habits for purposes of better understanding the population as well as more directly targeting specific barriers to passing the NCMHCE.

Test anxiety involves a number of symptoms including restlessness and forgetfulness. During administration of the CETAI, I was able to observe the impact of these symptoms. For example, often when participants were going through simulations they would make answer selections quickly, without fully reading the questions first. This typically resulted in frustration for the participant because the answers selected were usually incorrect choices. When this occurred, I empathized with the frustration and sometimes just wanted to grab the hands of the participant, hold them tightly, look them in the eyes and say “Breathe. You can do this.” Instead, I would suggest a behavioral intervention such as the participant putting their hands in their lap until they finished reading the question being asked as well as all of the answer choices. Participants seemed to be more comfortable with exam questions such as “What might you ask this client to determine their support network?” or “Based on the intake data for this client, what issues might you pursue?” However, during sessions, it was common for participants to
experience a “brain freeze” when they got to a section of a simulation that asked about which theories would be best suited for a particular client, or which assessments would be most appropriate for a specific set of symptoms, for instance. Often, participants would say things like “I know what that is, I just can’t remember” or “I’m drawing a blank.” When this happened, I almost always wanted to come to the rescue and give the participant the correct answer to alleviate their anxiety. However, I feared that this would create the feeling of a safety net that would not be available during the actual exam so instead of coming to the rescue, I would say, “Take your time. You know more than you think you do, just make the selection(s) you feel the most confident about.” More often than not, the participant would then choose the most obviously correct answer selection and I was able to leverage this opportunity to expose them to (an)other correct answer selection(s). This approach prevented me from giving participants the correct answers, which would not have been helpful, and instead gave me an educational platform to expand the knowledge of the participant. For example, if we were working through a simulation and the client presented in the case was abusing drugs and alcohol, the participant may have “drawn a blank” when asked which assessments could yield additional information about the client. After carefully reviewing the answer selections based on my suggestion to slow down and make the most confident choice, a participant may only select “Substance Abuse Screening” because this is quite straightforward and directly corresponds to symptoms of drug and alcohol abuse. I could tell that the emotional effort it took for participants to channel the courage to make even the most obvious answer selection was usually quite taxing. At that point, I was able to provide encouragement and say things like “There you go. You did it, and you made the BEST answer selection. Very good! Now, let’s look at a few more of these choices…” which allowed me to contribute to knowledge building. I would say something like, “Let’s talk
about the CAGE questionnaire for a minute…this assessment is used for alcohol use, let’s select it since we know this client is abusing both drugs and alcohol.” Usually, during an exchange like this, participants were very receptive to learning new material because they felt confident about having overcoming a challenge after making a correct choice all on their own. I personally favor the approach to teaching that rides a wave of confidence after a success over the approach that involves pointing out what a learner does not know. After all, with these participants, they failed the NCMHCE. If anyone feels like they are not knowledgeable enough, it is these individuals. Rather than reminding participants that they do not know enough to pass the test, I have found that reminding them they know more than they think they do and building on that knowledge creates a much more nurturing and productive learning environment that decreases test anxiety.

**Poor study skills**

Information processing impairment influences academic performance in a variety of ways including during the initial learning of the information while studying as well as retrieving it on test day. Study habits have an influence in terms of which stage of the information processing sequence challenges are most likely to occur. For example, highly test anxious students with poor study skills seem to struggle in all stages of information processing (they have difficulty learning the material when they are studying and retrieving the material during the test) and highly test anxious students with good study skills seem to struggle just with retrieving the material during the test. Although the qualitative data collected from email communication indicates that the participants in this sample identified as having Poor study skills, during Skype conversations some participants also identified as having good study skills, and all participants described feeling tremendous anxiety and difficulty in retrieving information during the actual NCMHCE.
Information processing deficits were also exposed when participants described losing points as a result of misinterpreting/misreading exam questions during the NCMHCE. For example, it was not uncommon for test takers to read a question that was asking for what answer selection would be the least appropriate, but as a result of information processing impairment the participant would attempt to select the most appropriate answer selection. Because of the format of the NCMHCE, this usually meant that the test taker would select every incorrect answer choice in a given section until they got to the last remaining answer, which was finally correct. The number of points that could be lost in a scenario like this is unknown, what is known is that the emotional experience of misinterpreting/misreading an exam question combined with the Wrong Answer Test Anxiety that follows can be detrimental. Being aware of how negatively this could impact a participant during the actual exam made training them to recover quickly from this sort of situation a priority, as reflected in the CETAI model (see Figure 4). One way of attempting to prevent the misreading or misinterpretation of test questions and/or answers was to encourage participants to take deep breaths in between every practice simulation test section in an effort to stay calm, focused, and in control. Another tool that was suggested to participants was to read the entire question, directions, and all of the answer choices twice just to be sure nothing was missed. Although these tools produced positive outcomes for participants in the sense that they would misread information less frequently, most participants did not like these suggestions because it meant that they were not able to complete a given simulation as quickly as they would have if they were not taking the time to practice deep breathing and re-reading. When I asked participants why they preferred a method they knew could result in misreading information over a method they knew helped them to read the question correctly, many participants explained that they “just wanted it to be over.” It was as if completing the simulation
was so anxiety provoking that they would have preferred to get out of the aversive situation with a failing score than to have stayed in the uncomfortable situation any longer than they needed to, even if doing so meant a more favorable outcome. Relating this to phobias, I suppose I can understand why someone terrified of heights would try to get down from the roof of a building immediately even if a reasonable person explained that the individual would have a much more positive result if they stayed on the roof, relaxed for 15 minutes, and visualized overcoming the fear with ease. Seeing this from a different perspective made me realize that I needed to communicate the importance of staying in control differently so I modified the approach to preventing participants from misreading questions by allowing them to go through the process of misreading a question, making a wrong answer choice, and losing points. When I knew a participant was misreading, although it was very difficult not to interrupt a participant and say “Wait a second… can you re-read that question one more time? I see it differently…” I got much better results by allowing participants to frustrate themselves because it presented me with an opportunity to reframe the situation. I would say something like “So, what happened just now?” which prompted the participant to say “I read the question wrong…” I was then able to say “But you didn’t get this question wrong because you didn’t know the answer. You got it wrong because you misread the question and we don’t want you misreading a question to stand in your way of showcasing your knowledge. Try slowing down, breathing, and reading your directions twice. You are in control of this test, not the other way around.” This guidance often helped participants shift their feelings of frustration into feelings of empowerment because they knew they could do something differently, and actually get a different result. What I loved was when a participant would implement the strategy, catch themselves all on their own, and then say, “See! I would have gotten that wrong if I didn’t read it again! I’m so glad I’m being more careful!” It
was inspiring to watch people work hard to change their behaviors and experience positive outcomes and reinforcement as a result of all of that emotional energy.

**Wrong answer test anxiety**

When test takers see that they have made a wrong answer selection during the NCMHCE, this triggers *Wrong Answer Test Anxiety*. Although the impact of *Wrong Answer Test Anxiety* was captured in the qualitative data, email correspondence does not accurately reflect how significant of a theme this was in actual conversations with participants. Often, when re-takers described their prior exam attempt(s) via Skype, they describe seeing a wrong answer as “traumatic” and “when everything went wrong.” Further, after test takers failed the exam, they often described feeling a great deal of fear associated with making a wrong answer selection again even during practice simulations when they were studying. The CETAI takes this into consideration by employing CBT techniques, specifically cognitive restructuring, to decrease the anxiety and fear associated with wrong answer selections so that re-takers are better equipped to deal with this type of stimuli on future NCMHCE attempts. *See Figure 4.*

I personally could identify with *Wrong Answer Test Anxiety* because I failed the NCMHCE on my first attempt after making an incorrect diagnosis. Before I made the incorrect selection, I thought I was performing well and I was certain I was going to pass. However, when I made the wrong choice, I completely lost my ability to think clearly, decrease my heart rate, and regulate my emotions. My hands started shaking, and in a matter of seconds I went from feeling certain I was going to pass to feeling certain I was going to fail (at both the test, and everything else). I never provided the details of my own personal experience with *Wrong Answer Test Anxiety* or failing the NCMHCE with a participant during CETAI administration. However, when participants described their own experiences with making wrong answer selections I truly
felt for them as a result of having personally experienced the surge of negative emotions and irrational thoughts that are triggered in the face of stimuli during the test that says, “you are wrong” followed by more stimuli on the score sheet after completing the exam that says, “you have failed.”

An error in thinking for many participants was that they could prevent the selection of wrong answer choices so much so that if a participant did make a wrong selection during a practice simulation, they would immediately move on to the next section without selecting any of the remaining correct answer choices in the section where they selected the wrong choice. It was as if they were so terrified by having made a wrong answer choice that they wanted to move onto the next section so that it did not happen again - almost in the same way a child touches a hot stove, gets burned, and then avoids touching the cooktop again. This approach of escaping from a section after getting burned rarely ended well for participants because they would often leave many points on the table and typically feel so distraught by the time they got to the next section that they would continue selecting incorrect answer choices. I found that the most effective way to reduce Wrong Answer Test Anxiety and keep a participant from further sabotaging themselves after making an incorrect answer selection was through cognitive restructuring, sharing with participants that they will get answers wrong on test day and they will still pass. Instead of seeing a wrong answer choice as an indicator of “failure,” a wrong answer choice is simply an indicator of navigating through the NCMHCE. I told participants that on the actual test they would absolutely get answers incorrect, and they would absolutely not make every single correct answer selection but this did not matter because earning a perfect 100% was not a requirement to pass the NCMHCE. This seemed to alleviate the pressure for many participants, while others still remained keyed up and sometimes angry when they made an
incorrect choice during practice simulations. Part of my responsibility as a test preparation instructor is to articulate for test takers why an answer selection may be incorrect. However, I would not be there with the participants to explain why an answer choice may be incorrect when they were retaking the actual NCMHCE so even though providing an explanation for why an answer may be right or wrong often helped decrease anger during practice simulations, I would also explain “On test day, you cannot let the exam get the best of your emotions. If you see that you have made a wrong answer choice, simply interpret that stimulus as you sharing a different opinion, just like you may have a difference of opinion with a colleague. There are room for many different approaches, and there is no sense is getting into a fight with the NCMHCE or yourself – the test will always win, so just surrender, focus on those answer selections that are most objectively correct, and slowly move on.” For those participants who experienced anger or irritability when they made wrong answer choices, reframing a wrong answer choice as a “difference of opinion” produced positive results. I never asked, but I always wondered if this was helpful because it encouraged the participant to shift their defensive negative thinking from “I made a wrong choice – I’m not good enough” to a more positive thought process “We just hold different opinions and that’s okay.”

Defeat

According to participants, when they failed the NCMHCE, they felt extremely defeated. What was not captured in the email communication between participants and myself were the raw moments when a test taker would start crying during a session because he/she got an answer wrong, failed a simulation, or was reminded of their prior exam attempt(s). During these exchanges, participants shared a range of expressions related to feeling discouraged and wanting to give up.
I remember when M8 considered giving up and not re-taking the NCMHCE. He said he was just too tired of failing and he also felt discouraged by the fact that less skilled counselors he personally knew seemed to pass the NCMHCE on their first attempt without even studying. F19 was already licensed and had been practicing for years but when she moved to a different state she had to take the NCMHCE. It was the first time she had seen this type of material in years and she became so discouraged by failing that she considered only practicing in the previous state in which she was licensed, despite this being unrealistic. F19 was not alone; there were actually 2 other participants in this study who had been licensed and practicing for years in other states before moving to a state that required a passing score on the NCMHCE to be licensed. This highlights the issue of license reciprocity and portability, which refers to a professional counselor’s ability to practice in other states in the event of a move. I always found it interesting that the more real world experience a participant had as a counselor, the more difficult it seemed for them to identify correct answer choices during practice simulations. When I would prompt participants about why they made a certain selection, it was not uncommon to be told that the answer choice aligned with the standards of protocol for their workplace. Some participants shared that their supervisors were unsupportive to the extent that they were not willing to provide additional training or guidance in the NCMHCE content areas that needed the most attention, as indicated by the NCMHCE score sheet. Based on the dialogue during Skype sessions, failing the NCMHCE was extremely discouraging in and of itself but even more defeating when it resulted in occupational stressors such as conflict with supervisors or job loss. Often, participants shared that they themselves were discouraged, but they felt even worse about potentially disappointing their spouses or children. For example, one of the things motivating F10 was her teenage daughter who was in high school, also preparing for and taking tests. Her daughter
encouraged her, supported her, and told her she believed in her. For F10, it was very painful and
discouraging to tell her daughter she failed the NCMHCE because she wanted her daughter to
“look up to her.” My heart ached for these people because I knew most of them well enough to
know that they were truly passionate about serving those in need. These were not individuals
who wanted an easy way out, they wanted to pass the test no matter how much hard work it took
because they knew becoming licensed was the vessel that would allow them to help more
people. I could not blame M8 for feeling discouraged by those around him performing so well on the
NCMHCE with seemingly no effort, even though he was studying for hours every day and on the
weekends. I could not blame F19 for feeling so discouraged she reconsidered ever practicing
across state lines. And, I certainly could not blame F10 for feeling like failing the NCMHCE also
meant that she failed in some way as a mother. The thoughts and feelings that were triggered by
experiencing defeat were complex, deep, and hard to reason with. However, as I mentioned,
what I knew about these participants was that they were completely committed to the profession
and their clients. Taking this into consideration, I learned that the most effective way to help
participants make sense of their defeat and channel it in a positive way was to remind them why
they were preparing for the NCMHCE in the first place. Encouraging participants to think about
their clients and how they would hope to see their clients respond to a similar situation almost
always facilitated the realization of a healthy perspective. I believe that putting things in this
context transformed the feeling of defeat into an opportunity for participants to see themselves as
role models of healthy coping skills for their clients.

Confidence lost

The qualitative data revealed that feelings of defeat led to a decrease in confidence.
Participants expressed losing confidence when they made a wrong answer selection, as well as a
desire to increase confidence. Although a decrease in confidence was a theme in Skype conversations, I was actually surprised to see it emerge when analyzing the qualitative data. Identifying a decrease in confidence as a major theme in the qualitative data highlighted the importance of gaining confidence as a function of the CETAI. During sessions, I had to manage my own struggle between wanting to increase confidence by being cheerleader for participants and needing to accurately and honestly communicate which content areas still need improvement before the participant retook the NCMHCE. I knew that if I told participants they were doing a good job when they really were not, I would reinforce what has likely prevented them from passing the NCMHCE all along. However, I needed to be encouraging so I communicated my recommendations for improvement in a positive and collaborative way. For example, if a participant made an incorrect diagnosis and lost confidence during a practice simulation, I would say something like “Don’t let this get you down, this is a gift – we’re just practicing right now and if we’re doing a good job of studying, we’re going to learn what areas need more attention. So, let’s be glad this wasn’t the real exam and let’s focus on this for a minute so you can take this new knowledge into the actual test.” Then, we would review the diagnostic criteria for the diagnoses with which the participant was unfamiliar and have dialogue about any confusion before moving onto the next section. Responding to a decrease in confidence using this approach seemed to make participants grateful for selecting a wrong answer choice and open to learning new information.
Research Question Two: What changes (if any) occur during the course of intervention administration?

Overall, through implementation of study skills training, participants made more informed answer selections, which increased their confidence. Through implementation of CBT interventions, participants also felt more calm and retrieved information more accurately.

Research Question Three: To what extent are evidence-based cognitive behavioral interventions coupled with study skills training capable of producing positive outcomes in Masters level post graduates’ performance on the NCMHCE after failing it at least once?

The Outcome: Successes and failures

According to the qualitative data captured via electronic communication as well as in actual conversations via Skype, when participants applied the CETAI techniques many of them were able to successfully pass the NCMHCE. I sent emails to all participants the night before their attempt to retake the NCMHCE (Appendix C). I reminded them that they had put a lot of hard work into preparing for this test, for the sake of benefiting their clients. I reminded them to practice their deep breathing, guided imagery and cognitive restructuring skills. I encouraged them to apply the test taking strategy we had been using together up until that point. I told them not to let anything stand in the way of showcasing their skills. On all of the dates that participants re-took the exam, I felt just the same way I did on the day I took (and retook) my own test. I kept my phone with me all day so I was able to answer the phone or open the email that would inform me of whether the participant passed or failed. When participants passed the NCMHCE, the feeling of joy and relief I experienced was profound. It was as if I actually simultaneously felt the weight that the participant had been carrying around be lifted from their shoulders and chest. I felt like I could inhale and exhale more deeply at that moment than I could
in the previous one. Often, participants thanked me and suggested I was the reason they were successful when they retook the NCMHCE but I never agreed with this. Instead, I simply felt grateful to be invited on such a personal journey. I was just a tool in this whole process, and the success was entirely theirs – it was a direct reflection of their work, not mine, and I always encouraged participants to take full responsibility for their success. However, when a participant was unsuccessful on their attempt to retake the NCMHCE, I found myself taking full responsibility for the failure. I suppose this phenomenon of not taking responsibility for the success of participants, yet taking full responsibility for the failures of participants in this study parallels a struggle I experience as a clinician. It is unsettling to consider the money I have collected and how unfair it must feel to the participant that they did not get the result they were hoping for. In some ways, I still felt like I had failed them and I simply cannot help but wonder what I could have done differently to be more helpful which is why I asked every participant in this study for constructive criticism after they re-took the NCMHCE.

As a clinician, I have always felt that I have learned more from my clients than they have learned from me. Similarly, as an educator, I have always felt that I have learned more from my students than they have learned from me. However, working in this role as a test preparation instructor, specializing in delivering services to counselors and counselors in training who were preparing to retake the NCMHCE has presented learning opportunities unlike any other role, particularly because it was so personal. During Skype calls, I was not only invited to help participants pass the NCMHCE, I was also invited into the private lives of participants. I got to observe the affection between participants and romantic partners when they were going to and from work in the mornings and evenings. Often, children of participants would say hello in the beginning of calls and I actually knew some kids better than others because they were the ones
responsible for getting Skype set up for their parents. I was able to be a part of some of the interactions between family members who were cooking dinner or doing other household activities in the background during sessions. I knew about soccer tournaments, important meetings at work, and tension in the household, because of the intimate nature of these sessions.

When I began working with these participants 4 years ago, I had just been accepted into the doctoral program of my dreams and my husband and I were expecting our first baby. Re-reading all of the email communications between myself and participants as part of this project was almost like viewing old home videos. As I reviewed the emails I felt nostalgic, reflective, and connected with former parts of myself. Some emails made me laugh out loud, and other made me cry. There was dialogue about rescheduling because I was in labor, there were email threads about what times of day I could meet with participants that accommodated my newborn’s nursing schedule, there was a request for my home address so that a participant could ship me a painting of a sunset he made for me as a way to say “thank you” which still hangs on my wall today. I was mailed the most beautiful Angel with a corresponding poem that sits on my office shelf. I keep a card that was sent to me be a participant 2 years ago in my nightstand and I re-read it as needed.

Today, my once tiny newborn is going to be starting Pre-Kindergarten, and now that I have come to the end of my doctoral journey, my husband is taking his turn by recently enrolling in the graduate program of his dreams. Throughout this process, I have experienced my own failures and watching my life over the last 4 years play out in the form of email threads with some of the most remarkable people I have been so lucky to meet makes me realize that although they may feel I was instrumental to their success, I believe they were as instrumental to mine.
Limitations

These data represent an ex post facto examination of the factors that led to the success of participants when they were intentionally being treated for test anxiety. As a result of knowing what I was looking for (test anxiety), it is possible that I overlooked any other important factors that could have led to being previously unsuccessful on the NCMHCE.

A threat to the trustworthiness of this study relates to the fact that participants did not complete a reliable and valid measure of test anxiety prior to or following the administration of the CETAI. Administering a reliable and valid measure of test anxiety pre and post CETAI would be helpful in terms of capturing more accurate levels of test anxiety pre and post intervention. Administering a reliable and valid measure of test anxiety throughout the CETAI would have been helpful in terms of evaluating the rate of change in test anxiety symptoms, as was done by Benor et al. (2009).

I was unable to identify whether the CBT techniques or the study skills training alone were most influential in terms of increasing academic performance, or if it was a combination of both. Given that study skills plays a role in determining which interventions are most useful, having participants complete an assessment that measures good and poor study skills, as was done by Naveh-Benjamin (1991) using the Survey of Study Habits and Attitudes Questionnaire would expose variations in highly anxious test takers preparing for the NCMHCE. This would have also strengthened the study because having this data would have enabled me to deliver an even more tailored intervention to participants as opposed to a broad intervention that meets the needs of highly anxious test takers who have both good and poor study skills.

In this study, there was only a treatment group. Comparing levels of test anxiety in individuals who have failed the NCMHCE to levels of test anxiety in test takers who are
preparing for but who have not failed the examination yet would have helped to determine if failing the NCMHCE is also a predictor of test anxiety.

One of the largest limitations in this study was that the qualitative data did not fully capture the thoughts of test takers because it was limited to written email communication. The majority of dialogue between participants and myself occurred verbally (via Skype) and was not recorded or transcribed.

An additional limitation was that the number of meetings I had with participants was not tracked consistently, which could contribute to an inaccurate picture in terms of Pass and Fail results post intervention. It is possible that I worked with a participant only one time prior to his or her NCMHCE retake attempt which means that the CETAI may have had little influence on an NCMHCE passing score post intervention. Along these same lines, if I worked with a participant multiple times, and he or she was still unsuccessful on the NCMHCE, this may suggest ineffectiveness of the CETAI.

A final limitation was the fact that although I tracked the number of exam attempts pre and post CETAI (Appendix D), I cannot determine definitively whether passing the NCMHCE occurred as the result of receiving the CETAI or if passing the NCMHCE occurred as the result of continual exposure to the real exam content and testing environment.

**Future Research**

The main recommendation for future research is to conduct a study that includes the administration of both an anxiety and study skills measure, pre, post, and during the intervention. In addition, the number of times a participant is exposed to the intervention should be established and quantified in advance (e.g., 12, 60 minute sessions for 12 weeks) or tracked and recorded for purposes of comparing groups who received different levels of exposure.
The recommendation that would have enhanced this study is to keep records of all exchanges in an effort to capture the most accurate and rich data from participants. This could be accomplished by administering questionnaires, conducting recorded structured or semi-structured group or individual interviews, or recording administrations of the CETAI with consent of participants.

Given that this study was an ex post facto examination of archival data associated with NCMHCE re-takers who expressed feeling test anxious, a more precise study would involve a brief, unbiased questionnaire that explores which factors participants feel could have influenced their failing score on the NCMHCE. Exploring the factors participants feel could have contributed to their failing score on the NCMHCE from a more broad perspective could shed light on a variety of issues (e.g., limited training, not enough study time, poor study skills) that may present opportunities for the development of proactive measures such as specialized preparation courses during graduate school, specific curriculum during internship, or relevant supplemental training.

Last, license reciprocity and portability was highlighted by participants in this study because 3 of them were originally licensed in other states that required the NCE for state licensure. Upon moving, these participants were required to pass the NCMHCE as per state requirements in their new states. Future research should attempt to differentiate the effects of individuals taking the exam based on professional status and experience.

**Implications for the Counseling Profession**

**Implications for clients: support for pre-licensed professionals**

The greatest implications of these findings for the counseling profession relates to the emotional experiences of counselors and counselors in training when they do not pass the
NCMHCE. According to the participants in this study, the most detrimental implication of failing the NCMHCE was failing to becoming licensed. Additional implications, however, relate to self-esteem and counselor self-efficacy, counselor identity, and financial stress and these issues seem to have a far-reaching impact on both the personal and professional lives of counselors and counselors in training. Considering the extensive emotional impact failing the NCMHCE may have on counselors and counselors in training, an exploration of the ways in which these factors may influence therapeutic relationships should be pursued. The benefit of doing so could lead to providing necessary support and guidance to counselors and counselors in training which directly relates to promoting high standards of care to clients receiving services from pre-licensed professionals.

**Implications for counselor educators and supervisors: study materials & curriculum**

Based on the fact that every participant in this study self-identified as being test anxious, another implication for counselors and counselor educators to consider based on this study is that test anxiety may be one of the barriers that stands in the way of test takers successfully passing the NCMHCE. One of the factors that contributes to anxiety about taking the NCMHCE relates to the fact that the format of the NCMHCE is very unique (a correct answer selection reveals additional information that is needed to answer future questions) and this format of an examination is an uncommon format for most college and masters level tests. Exposing students who are earning a Masters Degree in Mental Health Counseling to the format of the NCMHCE during graduate school may contribute to the development of stronger test taking skills and decrease test anxiety among students who are test anxious.
Implications for counselors: license reciprocity

Another implication for counselors that was exposed by participants relates to license reciprocity and portability, which refers to a professional counselors’ ability to practice across state lines. Each state has different standards for licensure eligibility meaning that earning a passing score on the NCMHCE is a requirement for licensure in some states, however, other states require a passing score on the National Certification Examination (NCE). In addition to different states requiring a passing score on different examinations to be license eligible, each state designates different credentials. For example, in the state of Florida, a passing score on the NCMHCE is a requirement to be eligible for the credential Licensed Mental Health Counselor (LMHC). Whereas in the state of Georgia, a passing score on the NCMHCE or the NCE is required to be eligible for the credential Licensed Professional Counselor (LPC). In the state of California, a passing score on the NCMHCE is required to be eligible for the credential LMHC and in Michigan, a passing score on the NCE is required to be eligible for the credential LPC. Although the varying standards of training, testing, and credentialing across states presents challenges to counselors, it is possible that the bigger implication of these inconsistencies relates to possible inconsistencies in client care.

Historically, the NCMHCE has been administered to post masters counselors and counselors in training as a requirement for state licensure in some states. However, in October 2015, NBCC began offering the NCMHCE as one of its exams for national certification (C. Chappell, personal communication, February 23, 2016). Prior to this, the National Certification Exam (NCE) was the only test offered for national certification. What this means is that pre-approved graduate programs can now nominate eligible students to take the NCMHCE prior to graduation, which presents a number of potential benefits. For example, it is possible that this...
recent change will require masters programs to administer “practice” tests in preparation for the real exam, which could alleviate anxiety through exposure to the unique format of the test. Many participants in this study had not taken a test in years so they had not seen some of the material for an extensive period of time and they also had forgotten how to properly prepare for an examination. It is possible that if students take the NCMHCE during graduate school, they will be in the “mode” of studying and the material they are being tested on will be more fresh in their minds. Also, because of how long it had been since some participants in this study had been in school, many of them had lost touch with former classmates from graduate school. By administering the NCMHCE during graduate school, students will be surrounded by a study network when they are preparing for the test, and a support network in the event they are unsuccessful on their NCMHCE attempt. For many participants in this study, I believe having the support of peers could have made a tremendous difference in terms of the toll failing took on them emotionally.

Conclusion

This study explored the degree to which self-reported test anxiety influences test performance relative to the NCMHCE by examining the nature of test anxiety related to the NCMHCE, any changes that occurred during the course of intervention administration, and whether or not the CETAI was effective in reducing test anxiety and increasing test taking performance.

In analyzing the email communication with participants, the following themes were identified: Test anxiety, Poor study skills, Misinterpreting/Misreading, Wrong answer test anxiety, Discouragement, Giving up, Confidence lost, Application of techniques, Confidence gained, and Passing the NCMHCE.
In regards to the nature of test anxiety, every participant who failed the NCMHCE and requested the CETAI also self-identified as being test anxious. Participants described anxiety symptoms such as panic attacks, tension, fatigue, and nervousness. These symptoms seemed to contribute to information processing challenges during the actual examination. The CETAI addresses these symptoms through study skills training and CBT interventions.

In terms of the changes that occurred during the course of intervention administration as participants applied the techniques they learned from the CETAI, they felt more calm, retrieved information more accurately, earned higher scores on practice tests, and increased their confidence. According to the quantitative results, the majority of participants passed the NCMHCE when they retook the exam post CETAI.

The findings in this exploratory study suggest that future research should examine which factors contribute to being unsuccessful on the NCMHCE from a more broad perspective for purposes of tailoring appropriate interventions proactively. In addition, the findings in this study further highlighted a current discussion in the profession which relates to a demand for training, licensure, and credentialing standards to be streamlined across states in an effort to standardize the quality of client care.
REFERENCES


APPENDICES
APPENDIX A

Practice Simulation Score Sheet

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APPENDIX B

Practice Exam Score Sheet

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APPENDIX C
Motivational Email

Dear “participant”,

As you do your final preparations for the big day, here are a few reminders that may be helpful:

First, remember how hard you have worked for this and how prepared you are to showcase all of your skills and knowledge.

Second, go slow. It is when test takers start going too fast that silly (yet costly) mistakes are made. If you start to go too fast, take a break, breathe, and center yourself.

Third, remember that you will get answers incorrect tomorrow and STILL PASS. So, when you see that you have gotten an answer wrong, take a deep breath, and recalibrate. Do NOT let a wrong answer distract you or compromise your performance.

As always, read through your simulation TWICE: the first time is to get a feel for what you are up against, the second time is to pull out diagnostic info that helps you to formulate your diagnosis (this includes information regarding impaired functioning as these will likely be clues for your treatment goals). Read through EVERY SINGLE ANSWER SELECTION before you make any choices, and make your selections in order of most confident to least confident.

It is possible that you will see a simulation on test day that seems like it’s totally coming from out of left field. You have worked so hard preparing for this test, and you can navigate through any simulation thrown your way. If you feel stumped, let the best interests of the client/ client welfare guide you through it.

You are going to do great tomorrow! :)

Aly
**APPENDIX D**

**Number of Exam Attempts Pre and Post CETAI**

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<tr>
<th>Participant</th>
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