

5-18-2007

## The Relationship Between Alexithymia, Wellness, and Substance Dependence

Benjamin J. Warner  
*University of New Orleans*

Follow this and additional works at: <https://scholarworks.uno.edu/td>

---

### Recommended Citation

Warner, Benjamin J., "The Relationship Between Alexithymia, Wellness, and Substance Dependence" (2007). *University of New Orleans Theses and Dissertations*. 560.  
<https://scholarworks.uno.edu/td/560>

This Dissertation is protected by copyright and/or related rights. It has been brought to you by ScholarWorks@UNO with permission from the rights-holder(s). You are free to use this Dissertation in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/or on the work itself.

This Dissertation has been accepted for inclusion in University of New Orleans Theses and Dissertations by an authorized administrator of ScholarWorks@UNO. For more information, please contact [scholarworks@uno.edu](mailto:scholarworks@uno.edu).

The Relationship Between Alexithymia, Wellness, and Substance Dependence

A Dissertation

Submitted to the Graduate Faculty of the  
University of New Orleans  
in partial fulfillment of the  
requirements for the degree of

Doctor of Philosophy  
in  
Counselor Education

by

Benjamin J. Warner

B.A., University of Arkansas, 1995  
M.Ed., Southern Arkansas University, 2000

May 2007

© 2007, Benjamin J. Warner

## DEDICATION

This dissertation is dedicated to my wife, Janna M. Welch, MD. Her love, support, and encouragement were the most important outcomes of this study.

## ACKNOWLEDGEMENTS

To my parents,  
Jerome and Linda Warner, and my sister, Rebecca Peterson, who helped develop my curiosity,  
and work ethic necessary for the completion of this research.

To my sons,  
Benjamin Isaac Warner and Nathaniel Raymond Warner, who have given me countless moments  
of exquisite joy, lessons on love and humanity, and an ongoing fascination with their  
emotional development as superheroes.

To Dr. Dan Bernard and Dr. Kim Bloss  
Who were great mentors and developed my interest in mental health and the counseling  
profession and began me on my doctoral journey.

To Dr. Diana Hulse-Killacky,  
A tremendous counselor-educator, researcher, and role model. Thank you for all you interest  
and guidance in my doctoral journey.

To Dr. Barbara Herlihy,  
For her dedication to students, dedication to the counseling profession, and succinct and  
invaluable feedback.

To Dr. Louis V. Paradise,  
My Chair and Methodologist.  
Who stayed with me through a dissertation process that was interrupted by job changes, an  
emergency medicine residency, marriage, the birth of my two sons, relocation, and  
Hurricane Katrina. Thank you for your support of my research ideas  
and staying with my glacial pace.

To the City of New Orleans and its renewal from Hurricane Katrina.  
I owe so much of my learning and growth as an individual, counselor, and counselor  
educator to its people, schools, culture, and soul.

## TABLE OF CONTENTS

<b>LIST OF TABLES .....</b>	<b>viii</b>
<b>ABSTRACT .....</b>	<b>ix</b>
<b>CHAPTER ONE: INTRODUCTION .....</b>	<b>1</b>
Purpose of this Study.....	1
Conceptual Framework .....	1
Defining Alexithymia.....	2
Defining Wellness .....	3
Defining Substance Dependence .....	4
Emotion and Alexithymia.....	5
Substance Dependence Counseling, Alexithymia, and Wellness .....	6
Implications of Alexithymia for Counselors and Counselor Education.....	8
Research Questions and Hypotheses.....	10
Delimitations.....	11
Definition of Terms and Operational Definitions .....	11
<b>CHAPTER TWO: REVIEW OF THE LITERATURE .....</b>	<b>14</b>
Alexithymia .....	14
Early Theoretical Approaches to Emotion .....	16
Modern Emotional Theory     18	
Postmodern Understanding of Emotion .....	20
Emotional Development .....	20
Alexithymia, Trauma, and Affect Dysregulation .....	24
Wellness.....	26
The Wellness Model .....	27
Substance Dependence .....	30
Defining Substance Dependence.....	30
Alexithymia and Substance Dependence .....	32
Research into Alexithymia and Substance Abuse Populations.....	34
The Wellness Model and Substance Dependence.....	36
Wellness and Substance Dependence Counseling .....	37
The Implications for Alexithymia to Substance Abuse Counseling .....	40
<b>CHAPTER THREE: METHODOLOGY .....</b>	<b>42</b>
Research Design.....	42
Research Questions and Hypotheses.....	43
Variables.....	44
Independent Variables .....	45
Dependent Variable .....	45
Participants .....	46
Instruments .....	49
The Wellness Evaluation of Lifestyle.....	49

Reliability of the WEL .....	50
Validity of the WEL.....	50
The Toronto Alexithymia Scale-20 .....	51
Reliability of the TAS-20 .....	52
Validity of the TAS-20.....	52
Data Analysis .....	53
<b>CHAPTER FOUR: RESULTS.....</b>	<b>55</b>
Characteristics of the Sample Population.....	55
Characteristics of the Undergraduate Sample Population .....	56
Gender Characteristics of the Sample Population .....	57
Ethnicity Characteristics of the Sample Population .....	58
Age Characteristics of the Sample Population .....	59
Test of Hypotheses .....	60
Type I and Type II Error .....	60
Research Question 1 .....	61
Data Analysis for Research Question 1.....	61
Test of Hypothesis 1 .....	61
Research Question 2 .....	62
Data Analysis for Research Question 2.....	62
Test of Hypothesis 2 .....	63
Research Question 3 .....	63
Data Analysis for Research Question .....	63
Test of Hypothesis 3 .....	64
Research Question 4 .....	64
Data Analysis for Question 4.....	64
Test of Hypothesis 4 .....	64
Summary.....	67
<b>CHAPTER FIVE: DISCUSSION.....</b>	<b>69</b>
Purposes of Study.....	69
Discussion of the Findings.....	69
Hypothesis 1 .....	69
Hypothesis 2.....	70
Hypothesis 3.....	71
Hypothesis 4.....	72
Limitations .....	74
Discussion of Alexithymia and Current Research .....	76
Discussion of Wellness and Current Research .....	77
Implications for Counselors and Counselor Educators .....	79
Alexithymia, Wellness, Counseling, and Counselor Education.....	79
Emotion Focused Treatment Orientations .....	85
Dialectical Behavior Therapy .....	86
Emotion Focused Therapy.....	92
Implications for Future Research.....	94

Conclusions.....	96
REFERENCES .....	98
<b>VITA.....</b>	<b>110</b>



## LIST OF TABLES

Table 1 Construction of Comparison Groups.....	56
Table 2 ANOVA Comparison of University Attended with Total WEL Scores as the Dependent Variable .....	57
Table 3 Frequency Distribution of Respondents by Gender .....	58
Table 4 Frequency Distribution of Respondents by Ethnicity .....	59
Table 5 Frequency Distribution of Respondents by Age .....	60
Table 6 ANOVA Results for Alexithymic and Non-Alexithymic Substance Dependent Groups with Total WEL Scores as the Dependent Variable .....	62
Table 7 ANOVA Results for Alexithymic and Non-Alexithymic Undergraduate Groups with Total WEL Scores as the Dependent Variable.....	63
Table 8 ANOVA Comparison of Four WEL Subscale Scores Tested as Dependent Variables.....	66

## **ABSTRACT**

This study examined the relationship between alexithymia, wellness, and substance dependence. Exploration of the relationship between alexithymia, emotional development, and wellness is largely absent in the literature, as is the use of wellness orientation in substance dependence treatment. This study was constructed from two samples, substance dependent clients in residential treatment in New Orleans, LA, and Austin, TX, and undergraduates from the University of New Orleans and the University of Texas at Austin. The total sample size for the study was  $n = 200$ . Each participant was administered the TAS-20 and the WEL. Four groups of  $n = 50$  were formed from undergraduates and substance dependent clients based on their scores on the TAS-20: alexithymic undergraduates, non-alexithymic undergraduates, alexithymic substance dependent clients, and non-alexithymic substance dependent clients. Overall wellness as measured by the WEL was found to be greater for non-alexithymic participants than alexithymic participants using four different ANOVA group comparisons. These results are important to clinicians working with substance abuse, to researchers interested in alexithymia, emotional development, and wellness; and to counselors and counselor educators.

Major Professor: Louis V. Paradise, Ph.D.

## **CHAPTER ONE**

### **INTRODUCTION**

This chapter contains an overall discussion of the purpose, conceptual framework, and essential theoretical framework of this study. The research questions and the associated assumptions and delimitations are also discussed. Next, hypotheses essential to this study are presented. Key terms that are unique and critical conclude this chapter.

#### **Purpose of this Study**

There were three outcomes of this study. First, this study examined the relationship between overall wellness and alexithymia in substance dependent and undergraduate sample populations. Second, the findings of this study were used to inform the fields of substance abuse counseling, counseling, and counselor education. Third, this study examined the relationship of overall wellness and alexithymia in order to make suggestions for future research.

#### **Conceptual Framework**

The conceptual framework of this study is based on providing clarity and insight into relationship between alexithymia, wellness, and substance dependence (Taylor, Bagby, Parker, 1997; Myers, Sweeney, Witmer, 2000). Although there is a substantial body of literature examining alexithymia, wellness, and substance dependence, the relationship between these three constructs has not been previously explored in the literature.

This study examined concepts emanating from three related disciplines, counseling, psychology, and psychiatry. Each of these disciplines presents valuable, but sometimes conflicting, theoretical orientations for understanding client issues. Historically, the fields of psychology and psychiatry often view clients through a “medical model,” or sometimes termed “illness model,” conceptual

framework (Remley & Herlihy, 2001, p. 20). The profession of counseling differs in that it primarily views clients through a “wellness model” conceptual framework (Remley & Herlihy). Overall, this study was conceptualized through the wellness model central to the field of counseling. The primary theoretical aim of this study was to expand the medical model concept of alexithymia into the wellness model of counseling in order to enrich the vitality and effectiveness of a variety of helping professions who work with clients suffering from addictions. Discussion of the value of viewing substance abuse clients through the wellness model rather than the medical model is presented in Chapter Two of this study.

### Defining Alexithymia

The word alexithymia is derived from Greek with “a,” meaning “lack,” “lexis,” meaning “word,” and “thymos,” referring to “emotion or mood” (Sifneos, 1973). Alexithymia, as a theoretical construct, refers to a personality trait in which an individual has difficulty in processing emotion. Over the years, researchers have further refined the alexithymic construct to its present definition:

(i) difficulty identifying feelings and distinguishing between feelings and the bodily sensations of emotional arousal; (ii) difficulty describing feelings to other people; (iii) constricted imaginal processes, as evidenced by a paucity of fantasies; and (iv) a stimulus-bound, externally oriented cognitive style (Taylor et al., 1997, p. 29).

Dysregulation in emotion has long been considered a symptom of many psychiatric and physical illnesses (Taylor et al., 1997). Sigmund Freud (1893/2000) theorized that unconscious conflict emanating from earlier trauma often could alter emotional experience in the form of anxiety, depression, and neurosis. Freud and most of the field of psychiatry and psychology conceptualized affect experience as secondary to instinctual drives (Taylor et al.), or existential crisis (Frankl, 1967), attachment (Bowlby, 1969), or cognitive conflict (Ellis, 2001),

Recently, emotion and affect have been explored as perhaps existing as a parallel and separate developmental continuum (Krystal, 1988). This refocus has renewed interest in affect research in medicine, psychology, and psychiatry (Haviland, Hendryx, Shaw, & Henry, 1994) and has re-conceptualized affect as a parallel influence, not secondary to the human developmental continuum (Krystal). As the profession of counseling embraces and further elaborates the wellness model as a theoretical orientation to holistic human development (Myers, Sweeney, & Witmer, 2000), alexithymia seems a necessary concept of interest to counseling.

### Defining Wellness

The origins of the concept of wellness began with the World Health Organization (WHO) in 1946, which set forth an initiative to redefine the concept of health and health promotion. The 1946 definition of wellness has yet to be revised by the WHO (Rikli & Jones, 1999) and is stated as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (Preamble to the Constitution of the World Health Organization, 1946). This model broadened the medical model perspective, and also introduced the idea of positive health, moving toward seeing health as dynamic and a multidimensional process. Since 1946, many theorists have written about the value of viewing clients through the multidimensional wellness process set forth by the WHO, particularly in many medical and psychological subfields such as health psychology, rehabilitation counseling, and psychoneuroimmunology (Hermon, 1995; Vecchione, 1999).

A key component of wellness is the idea of "holism" or that wellness is "holistic," meaning the wellness orientation sees clients in a sense of "oneness" influenced by the complex interaction of physiological, psychological, emotional, social, and spiritual processes (Vecchione, 1999, p. 56). The wellness construct has been the focus of considerable research,

particularly in implementation of wellness concepts into traditional medical model treatments (Vecchione). Research suggests that many fields are beginning to reassess the pathology focus in health service delivery by moving towards a preventive wellness model (Vecchione). Subsequently, “operationalized definitions” of wellness emanate from many disciplines (Hermon, 1995; Vecchione).

In the field of counseling, Myers et al. (2000) have defined wellness as "a way of life oriented toward optimal health and well-being in which body, mind and spirit are integrated in the individual to live more fully within the human and natural community" (p. 252). This definition is elaborated by Myers et al. in development of the Wellness Evaluation of Lifestyle (WEL, 2001) used to assess wellness. More specific discussion on wellness and the WEL occurs in Chapters Two and Three of this study.

#### Defining Substance Dependence

Substance dependence is often referred to popularly as addiction. The term substance dependence is used as a diagnostic classification by the *Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> edition, Text Revision* (APA, 2000). This text presents the most current criteria used by the majority of mental health professionals to diagnose the complex state of substance dependent behavior and other mental disorders (Ivey & Ivey, 1991). The particular criteria and explanation of the essential behaviors used to diagnose substance dependent clients are presented at length in Chapter Two of this study.

In general, substance dependence implies four areas of client behaviors observable by a clinician making the substance dependence diagnosis. First, a client must engage in a pattern of substance abuse. Second, a client must demonstrate both tolerance (increasing amounts of the substance needed) and withdrawal (physiological and/or psychological distress in the absence of the

substance). Finally, the pattern of substance abuse must severely impact the overall social and interpersonal functioning of the client (Galanter, 1991).

### Emotion and Alexithymia

Emotions, affects, or feelings seem to have complex relationships with substance abuse and dependency according to the literature (Krystal, 1988). For the purpose of discussion, the terms emotion, affect, and feeling are used in this study interchangeably. Traditionally, emotional development has been conceptualized as inseparable from cognitive development (Ellis, 200; Ivey & Ivey, 1991). However, many theorists in the 1990s began to examine affective dimensions of individuals as possibly having a separate developmental continuum from cognitive development (Goleman, 1995, Greenberg, 1996; Taylor, et al., 1997).

In general terms, emotions are thought to be cues for an individual to react to the environment (Krystal, 1988). For example, when a threat occurs in the environment one may feel fear, and therefore may flee the corresponding environmental stimulus. This affective sense of danger has several interrelated components: a cognitive message, a physiological expression, a hedonic sensation (various shades of feeling from pleasure to pain), and a behavioral response (Krystal). According to Krystal, more complex affective states such as depression or anxiety carry these same interrelated components. Disorders of affect regulation, such as alexithymia, are thought to occur when one of these emotional components ceases to function optimally.

Alexithymia is thought to be a stable personality trait predisposing clients to a variety of medical and psychiatric illnesses (Taylor, Bagby, & Parker, 1991). Research also suggests substance dependence may be a symptom of a larger state of emotional dysregulation, such as alexithymia (Taylor et al., 1997). In general, alexithymia is thought to be caused by traumatic experiences that hinder the development of higher levels of emotional development (Krystal, 1988). This emotional

dysregulation refers to a state of affectively experiencing the world in global, polarized affective states of either “good” or “bad” emotions. Alexithymic individuals have difficulty in distinguishing the nuances of emotional messages that allow individuals to communicate effectively. For example, the cognitive message for an individual experiencing depression may be anger at having partial responsibility for a feeling of loss. However, the individual may be unable to fully realize this message and therefore only feel physiological pain. One behavioral action to counteract this feeling would be introducing substance abuse to turn about the unwanted physiological sensation (Taylor et al., 1997).

Research suggests that the prevalence rate for alexithymia in the general population is somewhere around 10 percent (Taylor et al., 1997). The rate for alexithymia for substance dependent populations is suggested to be from 50 to 70% (Haviland, 1988). The measurement tool used for this research, the 20-item Toronto Alexithymia Survey (Taylor et al.) has shown no significant difference for alexithymia scores based on gender (Haviland, Hendryx, Shaw, & Henry, 1994). In addition, translation of this instrument in Finland, Japan, India, Germany, and Italy all reflect similar scores, perhaps demonstrating that alexithymia is not a culturally-bound construct (Taylor et al.). This suggests that affect dysregulation does occur cross-culturally and in both male and female populations.

#### Substance Dependence Counseling, Alexithymia, and Wellness

Traditionally, substance dependence counseling has focused on the pathology of addiction and explored the deficits causing addiction as a means to rehabilitate clients suffering from substance dependence (Galanter, 1991). This focus on pathology is derived from behavioral diagnosis using the *DSM-IV TR* and has evolved from the traditional medical model orientation to treatment (Galanter). Treatment is often implemented with diagnosis by use of confrontation in individual and



group therapy about denial and defense mechanisms (Levin, Culkin, & Perrotto, 2001). Although this treatment modality often has success, research implies that focusing on client deficits instead of client strengths often can promote guilt and shame in relapse, lack of honesty in treatment, marginalization, and a sense of defensiveness among involuntary, adjudicated clients (Levin et al., 2001; Seligman, 1996).

Research into the occurrence of alexithymia among substance abuse populations suggests that many clients in substance dependence treatment also suffer from unusually high alexithymic states (Taylor et al., 1997). These alexithymic states perhaps point to an overall diminished sense of wellness due to poor emotional coping skills. Treatment that is substance-abuse specific may potentially ignore the more pervasive alexithymic states of substance dependent populations, thereby minimizing client recovery from addiction. The alexithymia construct suggests that substance dependence is indicative of a more pervasive lack of healthy emotional regulation. More explanation on the influence of alexithymia on addictive behaviors occurs in Chapter Two. Currently, there is absence of research into the relationship between alexithymia and overall wellness, which was a focus of this study.

Using a much different view, the wellness model, dependency can be seen as a lifestyle issue affecting multiple individual and environmental contexts, including alexithymic states. Managing alexithymic states to promote overall wellness is the responsibility of the client and should focus on promoting holistic health rather than focusing solely on deficits as a means to successful recovery (Myers et al., 2000).

Regardless of the origins of addiction, clients in treatment for addiction often struggle profoundly when returning to environments where the substance use occurred, thereby reflected in the 20 to 30% chronic relapse rate for users (American Psychiatric Association, 2000). The concept

of alexithymia as used in this study seems to point to a larger picture of substance abuse clients demonstrating a diminished sense of overall emotional development.

If affect development is a fundamental part of overall human development (Goleman, 1995; Krystal, 1988; Taylor et al., 1997), a more thorough understanding of alexithymia as it applies to holistic wellness and recovery could to be an important and practical aspect of future substance dependence counseling. Currently, an understanding of the relationship between overall wellness and alexithymia is absent in the literature. The primary purpose of this study was to examine the relationship between overall wellness and alexithymia.

#### Implications of Alexithymia for Counselors and Counselor Education

Although the alexithymia construct is firmly rooted in the medical model of psychiatry and psychology, the findings of research in this area perhaps are supportive of the wellness model of counseling. Currently, most treatment orientations for substance abuse emphasize deficits, pathology, and diagnosis (Levin et al., 2001). Typically, treatment is substance abuse specific (e.g., Minnesota Model, cognitive restructuring, behavior modification; Stinchfield & Owen, 1998), or faith based (e.g., Alcoholics Anonymous, Narcotics Anonymous; Galanter, 1991; Humpherys, 1999). Levin et al. pointed out that these treatment orientations often are directive, confrontational, and emphasize substance abuse as “the target problem” (p. 271) with less regard for the behavior as a symptom of something larger.

If the alexithymia construct is extended to the wellness model, substance abuse can be viewed as poor coping behavior in regard to regulating emotions and overall holistic wellness. In other words, if overall emotional, physical, spiritual, and sociocultural wellness is the goal of substance abuse counseling, might the abuse behavior be diminished? Put more simply, perhaps substance abuse is not a personality deficit, but an ineffective wellness lifestyle choice. If the wellness model

proposes using client responsibility, inherent strengths, and family and environmental resources to empower clients (Myers et al., 2000), might the same be extended to substance dependence populations? As mentioned, there is a lack of research into the relationship between overall wellness and alexithymia.

Conceptualizing substance abuse clients through a lens of affect dysregulation can be helpful to educating counselors. First, alexithymia as related to substance dependence offers a clearer sense of the components of affect dysregulation. Counselors conceivably could process the interrelated dimensions of affect to strengthen the overall functioning of a client (Krystal, 1988). Second, understanding the connection between alexithymia and substance dependence allows a counselor a broader, more contextual sense of the substance abuse behavior outside of the traditional behavior-focused and deficit-focused interventions currently used (Taylor et al., 1997).

Third, alexithymia conceives of substance dependence and other personality disorders as symptomatic of a larger system of alexithymic experience based in trauma. This move from the deficit-focus of the medical model to the more empowering and empathic stance of the trauma-focus of the alexithymia model seems to offer a more humane picture of substance abuse clients. For counselors, understanding the complex interaction of trauma, emotion, and substance use seems necessary in order to fully find understanding and effective clinical applications.

Thus, there were three overall outcomes of this study. First, this study examined if the alexithymia construct has a relationship with overall wellness for substance dependent clients. Second, this study examined the relationship between alexithymia and overall wellness in order to inform the field of substance abuse counseling and counselor education. Third, this study examined the relationship between overall wellness and alexithymia in order to suggest future research in the helping professions.

## Research Questions and Hypotheses

This study examined the following research questions:

**Research Question 1:** Do the total wellness scores for the non-alexithymic substance dependent group differ from the alexithymic substance dependent group?

**Research Hypothesis 1:** The total wellness scores for the non-alexithymic substance dependent group will be higher than the total wellness scores for the alexithymic substance dependent group.

**Research Question 2:** Are the total wellness scores of the non-alexithymic undergraduate group higher than the alexithymic undergraduate group?

**Research Hypothesis 2:** The total wellness scores for non-alexithymic undergraduate group will be higher than the total wellness scores for the alexithymic undergraduate group.

**Research Question 3:** Are the total wellness scores for the non-alexithymic group higher than the total wellness scores for the alexithymic group?

**Research Hypothesis 3:** The total wellness scores of the nonalexithymic groups will be higher than the total wellness scores of the alexithymic groups.

**Research Question 4:** Are there significant differences in the sense of worth, sense of control, realistic beliefs, and emotional responsiveness WEL subscales scores among each of the four groups?

**Research Hypothesis 4:** There are significant differences in the sense of worth, sense of control, realistic beliefs, and emotional responsiveness WEL subscales for each of the four groups.

## Delimitations

The delimitations of this study were set mainly by the nature of the sample taken from the population being studied. Delimitation has been defined as a “boundary to which the study was deliberately confined.” (Pryczak & Bruce, 1998, p. 57). This study had one major delimitation. Due to financial constraints and logistical limitations the study focused only on substance dependent clients and college students in the New Orleans, Louisiana, and Austin, Texas, metropolitan areas. These clients may not be representative of clients across the country or globally.

## Definitions of Terms and Operational Definitions

The following terms are defined for the reader to have a clearer understanding of the concepts being researched in this study:

### Alexithymia

Alexithymia is defined as a stable trait in which participants have difficulty making meaning from his or her emotions. Taylor et al. (1997) identify a four-component definition of this concept in that alexithymic individuals have (i) difficulty identifying feelings and distinguishing between feelings and the bodily sensations of emotional arousal; (ii) difficulty describing feelings to other people; (iii) constricted imaginal processes, as evidenced by a paucity of fantasies; and have (iv) a stimulus-bound, externally oriented cognitive style. In addition, alexithymia will be determined for this study by participant scores at or above 76 on the Toronto Alexithymia Scale-20 (Taylor et al., 1997).

### Non-alexithymia

Non-alexithymia refers to clients who do not present components of the alexithymia trait. This trait will be determined by participant scores at 75 or below on the TAS-20 (Taylor et al., 1997). The non-alexithymia trait of clients is also referred to in the literature as *lexithymia*, or as clients being *non-alexithymic* (Krystal, 1988; Taylor et al., 1997).

### Substance Dependence

Substance dependence is defined by the *DSM IV-TR* as the behavior of substance abuse that additionally meets the *DSM IV-TR* criteria for tolerance and withdrawal. For a more thorough discussion of this term refer to the *DSM IV-TR* criteria discussed in Chapter Two. Addiction will also be used as a comparable term to substance dependence.

### Wellness

Wellness refers to “a way of life oriented toward optimal health, and well-being, in which mind, body, and spirit are integrated to achieve maximum health (Myers et al., 2001, p. 252).” Wellness implies a constructivist, multi-dimensional understanding of health rather than a linear, medical model understanding of health.

### Emotion

Krystal (1997) states that emotions are cues for an individual to react to the environment. Research suggests that there are several interrelated components of emotion (Taylor et al., 1997). First, emotion has a cognitive message pertaining to thought. Second, emotions are thought to have a physiological expression. Third, emotions are thought to have a hedonistic sensation that suggests

various shades of feeling from pleasure to pain. Last, emotions are thought to have a behavioral response that initiates action (Krystal, 1997). The terms affect and feeling were used interchangeably throughout this study.

## CHAPTER TWO

### REVIEW OF THE LITERATURE

This chapter reviews the research literature that is pertinent to the three theoretical constructs of alexithymia, wellness, and substance dependence. Three major tasks are attempted in this chapter. First, previous research on these theoretical constructs is briefly reviewed. Second, an elaboration on how these constructs interrelate is presented. Third, suggestions are made that attempt to define an interrelated area not previously examined in the literature. This unexamined area of the relationship between alexithymia, wellness, and substance dependence is the primary focus of the research questions and hypotheses of this study.

#### Alexithymia

Alexithymia as a theoretical construct refers to a personality trait in which an individual has difficulty in processing emotion. Taylor et al. (1997) have defined alexithymia as consisting of four criteria. First, alexithymic individuals have difficulty distinguishing between the psychological dimensions of affect and “bodily sensations of emotional arousal” (p. 29); that is, individuals suffering from alexithymia have a tendency to process emotion primarily as a somatic experience.

Second, alexithymic individuals have difficulty communicating or describing emotions to others. Alexithymic individuals have difficulty viewing emotional experience as an integrated facet of their individual development. To alexithymic individuals, emotional experience is often seen as a separate, vague, and mysterious phenomenon separate from other psychological experiences. Thus, alexithymic individuals have difficulty viewing any communicative function of their emotional experience (Krystal, 1988).



Third, alexithymic individuals have “constricted imaginal processes, as evidenced by a paucity of fantasies” (Taylor et al., 1997, p. 29). This criterion describes the difficulty alexithymic individuals have in linking emotional responses to larger interrelated dimensions in their lives. For example, an alexithymic individual may have difficulty linking a specific emotion to previous cognitions, behaviors, fantasies, or “higher level affects” (Taylor et al., p. 29). Fourth, individuals suffering from alexithymia often present themselves as having “a stimulus-bound, externally oriented cognitive style” (Taylor et al., p. 29). This criterion refers to a tendency of alexithymic individuals’ thoughts and feelings to be influenced primarily by their behavior and a tendency to engage in “markedly dependent relationships” (Taylor et al., p. 29).

From these criteria, Taylor et al. (1997) developed the 20-question Toronto Alexithymia Survey (TAS-20) as an assessment of alexithymia. The TAS-20 was used in this study because it represented the best current measurement of the alexithymia construct. Detailed information on the TAS-20 occurs later in this Chapter and in Chapter 3.

Alexithymia can also be understood as tracing its theoretical evolution from earlier, less empirically validated and less defined psychological constructs. Two other constructs, *psychological mindedness* and *emotional intelligence*, are most similar to the alexithymia construct. Psychological mindedness was defined by Applebaum (1973) as an individual’s “ability to see relationships among thoughts, feelings, and actions, with the goal of learning the meanings and causes of his experience and behavior” (p. 36). Taylor et al. (1997) suggested that this construct overlaps with the third criterion of the alexithymia construct. However, psychological mindedness has yet to be validated empirically, unlike the alexithymia construct (Taylor et al.). Further, the literature suggests that psychological-mindedness is difficult to

distinguish from other concepts such as “openness to experience” (McCrae & Costa, 1987), “introspection” (Durand & Barlow, 1997), or “mindfulness” (Linehan, 1993).

Emotional intelligence is a recently formulated construct that bears some relation to the alexithymia construct, yet has very little empirical validation (Goleman, 1995). Taylor et al. (1997) stated that a measure of emotional intelligence has yet to be constructed. In fact, emotional intelligence has been defined mostly as a set of skills to increase overall communication (Salovey & Mayer, 1990).

Alexithymia, in contrast to these other psychological constructs, is focused primarily on the dysregulation of emotion (Taylor et al., 1997). Psychological mindedness refers to the capacity for psychological insight and emotional intelligence refers primarily to the cognitive meaning of affects. The focus of the alexithymia construct is primarily on defining the criterion of affect dysregulation. Although alexithymic symptoms most probably influence other psychological dimensions such as cognition, and behavior, and relationships, the value of the alexithymic construct seems to be in defining the components of emotional dysregulation. From a wellness, holistic perspective the importance of defining the components of emotional dysregulation is not to promote the supremacy of emotional dimensions over other psychological dimensions, but rather to add to the clinician’s understanding of many dimensions that comprise the individual client.

#### *Early Theoretical Orientations to Emotion*

To further understand the components of alexithymia and wellness with substance dependent clients, theoretical approaches to emotion must be thoroughly examined (Taylor et al., 1997). Historically, emotion often has been a difficult concept to research in that the nature of emotion can be argued as existing as a non-verbal phenomenon (Durand & Barlow, 1997).

Unlike behavior, which can be observed, and cognition, which can be expressed verbally, the essence of emotion seems to lie outside of linear phenomenology and in the realm of the qualitative experience (Krystal, 1988).

The beginning of research into emotion by Western science seems to have been most notably understood through the work of Darwin (1872), James and Lange (1890), and Cannon and Bard (1929). Darwin (1872) proposed that emotional responses could be viewed as having discrete categories (e.g., anger, joy, fear, pain) that occur across cultures and species (Krystal, 1988). Researchers could verify Darwin's assumption by comparing the similar facial and physiological responses that occur when individuals and primates encounter the same provoking stimuli.

Darwin (1872) deduced that emotion has a physiological component that is related to communication cross-culturally and cross-species. In other words, physiological manifestations of emotion, for example baring teeth, can be understood as having a similar emotional message of anger. Further, the physiological expression of emotion could perhaps be understood as an evolutionary connection of the brain as it evolved from primates to the more sophisticated human mind (Krystal, 1988). Researchers in evolutionary psychology suggest emotion, specifically the function of the amygdala, links the evolution of the human brain to lower primates (Crain, 1992).

A secondary role of emotion proposed by Darwin is that the communicative function of emotion promotes bonding, relationships, the evolution of social order, and ultimately the adaptive selection of "the fittest" (Crain, 1992. p. 30). To summarize, Darwin's conception of emotion provided two distinctive characteristics in that emotions are both individually expressive and socially adaptive (Plutchik, 1993).

Other 19<sup>th</sup> century theorists, such as James and Lange also conceptualized emotions as motivated primarily by physiological phenomena, according to Taylor et al. (1997). The James-Lange theory of emotion proposes that emotions were essentially “awareness” by-products of physiological responses to environmental stimuli (Taylor et al.); that is, emotions are a direct response to environmental stimuli and not necessarily products of cognition. This seemingly goes against the commonly held view that when a bad experience happens, we feel sad, and then cry. Rather, according to the James-Lange theory, a bad experience happens, we cry, and then our interpretation of this experience is sadness, the emotion (James, 1890/1950).

In contrast to the James-Lange theory, Cannon and Bard, contemporaries of James and Lange, argued that emotion and physiological reactions occur simultaneously and are fully integrated in the mind. According to Cannon and Bard, a bad experience happens, we simultaneously cry and interpret the experience as sad. In the Cannon-Bard theory, mind, and specifically emotion, is a negotiation between physiological response and cognitive interpretation (Cannon, 1929).

Both theories attempted to create a schematic for emotion that attempts to find the genesis of emotion, yet a lack of resolution between the two is perhaps more an aspect of the limits of modernism reasoning over postmodern understanding of emotion. Still, James, Lange, Cannon, and Bard are important pioneers who first set forth early theories on emotion, which have moved the inquiry forward into emotion (Durand & Barlow, 1997).

### *Modern Emotional Theory*

From these roots of understanding emotions as having multiple components, modern emotional theory has argued (Taylor et al., 1997)---largely in consensus---that emotion is comprised of three primary characteristics. First, emotions are thought to have

neurophysiological processes in that the autonomic nervous system and neuroendocrine system are activated to release neurochemicals that communicate messages from the nervous system to activate other physiological processes (Taylor et al.). These physiological processes are the secondary component of emotions in that they represent motor or behavioral-expressive processes that govern a myriad of observable phenomena such as facial expressions, crying, changes in posture and tone of voice (Taylor et al.). Third, emotions are understood as creating a cognitive-experiential system that is described by Taylor et al. as having a cognitive meaning and is used to report feeling states.

This third cognitive-experiential aspect is the focus of much of the research in this study and in evolutionary terms draws a distinction between what is understood as animal emotion, as related to Darwin's theory, and human mind and emotion (Frigda, 1986). In the cognitive-experiential concept one can see the role of counseling and psychotherapy as using the cognitive parts of emotion to remediate and regulate emotional wholeness (Ivey, 1991). Interestingly, much of psychological and counseling theory can be understood broadly as championing one of these three components of emotion previously explicated. For example, the role of psychiatry often is concerned primarily with the neurophysiological regulation of affect, the role of behaviorism and biofeedback with the motor and behavioral-expressive system; and the role of existential, humanistic, and cognitive therapy with the cognitive-experiential aspect (Sifneos, 1988).

The above orientations to emotion often use language that further demarcates the focal point of their particular orientation. Generally *emotion* is thought to be in the realm of the neurophysiological and motor-behavioral processes, the concept of *feeling* usually addresses the cognitive-expressive system, and the concept of *affect* concerns a integration of all three

dimensions (Sifneos, 1988). However, there is still some inconsistency and confusion about the interchangeability of these terms in the literature, which further complicates the specification of emotional development (Taylor et al., 1997). There is still a lack of consensus in the literature on the exact parameters of the constructs of emotion, feeling, and affect. Thus, as stated in Chapter One, emotion, feeling, and affect were used interchangeably in this study when describing emotional development.

### *Postmodern Understanding of Emotion*

Freud believed emotions were secondary representations of the instinctual drive of the libido. This notion was based on Darwin's work on the evolution of the human species, according to Crain (1992). In classic Freudian thought, emotion was a secondary outcome by the personality negotiating the primary conflict of the id, ego, and superego. In postmodern development of emotional theory, Tomkins (1984) proposed that affects comprise a primary motivation for human beings, and are conscious phenomena, not singularly unconscious conflict.

Tomkins (1984) elaborated that human drives derive power from affects, which function as amplifiers, and that cognition is separate from affect systems (Taylor et al., 1997). In addition, Tomkins argued that cognition and emotion are neither always primary, nor secondary, but that emotions can control cognitions or be controlled by them or be integrally interconnected with them (Tomkins). Tomkins argued that the interrelatedness of cognition, behavior, and emotion at once are negotiated to develop the individuality of personality in reaction to variable environmental experiences.

### *Emotional Development*

Alexithymia is a state of affect dysregulation. Dysregulation connotes a sense that emotions have distinct domains that are either regulated in a healthy sense for an individual, or in a

pathological sense. The pathological sense of emotional dysregulation is at the core of the construct of alexithymia. Taylor et al. (1997) and Krystal (1988) stated that alexithymia, or affect dysregulation, correlates with many mental and physical disorders, besides substance dependence, such as somatoform disorders, eating disorders, and sexual disorders.

In general terms, emotions are thought to be cues for an individual to react to the environment (Krystal, 1988). For example, when a threat occurs in the environment one may feel fear, and therefore may flee the corresponding environmental stimulus. Taylor et al. (1997) proposed that emotions have three main identifiable components, the neurophysiological process, the motor and behavioral process, and the cognitive-experiential process. Krystal (1993) has elaborated on these modernist components and proposed that emotions have several more interrelated components. According to Krystal, emotions are composed of a four-part schematic including the following: a cognitive message, a physiological expression, a hedonic sensation (various shades of feeling from pleasure to pain), and a behavioral response.

Krystal (1988) further stated that more complex affective states such as depression or anxiety carry these same interrelated components. Disorders of affect regulation occur when one of these emotional components (behavioral response, hedonic sensation, physiological expression, and cognitive message) ceases to function optimally. Such dysfunction in emotional regulation is thought to be brought on by trauma.

Taylor et al. (1997) suggested that research into affect development has its beginnings in cognitive development theory. Piaget (1967) proposed that affects follow similar developmental patterns as those of cognitive development, although he did not write on affect development at length. Lane and Schwartz (1987) used Piaget's ideas on cognitive development to create a five-level model for emotional development. The first level in this model is the *sensorimotor*

*reflexive* level, in which emotions are experienced as bodily sensations. The second level, the *sensorimotor enactive* level, suggests that emotion is experienced as a body sensation and a behavioral motivation. The third level of affect development, the *preoperational* level, occurs when emotions are experienced as cognitions, or psychologically. In the fourth level, *concrete operational* affect development, emotion is thought to be awareness of complex “blends” of emotions where the individual can “differentiate” between complex states and their “subjective experience.” The last, fifth level is called the *formal operational* level, in which complexity and nuances of others people’s emotional world can be referenced empathically (Lane & Schwartz, 1987).

The Lane and Schwartz (1987) model implies that states of affect regulation correspond with human maturation, although discrete age levels for the affect development levels are not established. In general, the sensorimotor reflexive and sensorimotor enactive levels occur in infancy. The preoperational and concrete operational levels occur in childhood and adolescence, and the formal operational level occurs in adolescence and adulthood (Lane & Schwarz). Lane and Schwartz noted that high cognitive development or intelligence does not necessarily imply high emotional development, in that “highly intelligent individuals may be quite unsophisticated in their awareness of their own emotional reactions or those of others” (p. 136). In other words, Lane and Schwartz proposed that high intellectual development, or cognitive development or I.Q., does not necessarily equate with high emotional development. This statement is core to the argument for emotions having a different developmental continuum than cognitive development (Lane & Schwartz; Taylor et al., 1997). Lane and Schwartz’s theory is essential to the construct of alexithymia in this study in that emotional development can be theorized as possibly having



an independent developmental continuum from cognitive development, thus being a necessary emotional construct for understanding clients in counseling settings.

The concept of emotional understanding or emotional regulation outside of primary cognitive or behavioral regulation has been defined as “emotional intelligence” by Goleman (1995) and Salovey, Hsee, and Mayer (1989). Skills of emotional intelligence include the ability to “appraise one’s emotions, . . . comprehend the feelings of other people and make empathic responses” (Salovey & Mayer, 1990, p. 186).

Another theory of affect development is that of Frosch (1995), whose theory, while based on psychoanalytic theory, uses a Piagetian framework. Frosch contended that affect development can be understood in two broad categories. Emotions develop at *preconceptual* levels in a linear sense (sensations, perceptions, and impulses) and later at an *abstract* level, in which emotions are more complex and similar to ways of knowing in the concrete and formal operational stages of cognitive development (Frosch).

Both Lane and Schwartz (1987) and Frosch (1995) seem to have depended on a modern, linear understanding of emotion in that a higher value is placed on the ability of an individual to experience abstract emotional regulation. Ivey and Ivey (1991) have pointed out that both concrete and abstract ways of knowing are essential to healthy human development. For example, experiencing the sensorimotor sensation of seeing a beautiful sunset is essential to the more abstract tasks of writing about the sunset and making complex analogies from the concrete experience. According to Ivey’s Developmental Counseling Theory (1986), unhindered movement in a behavioral, cognitive, and affective sense between many states of concrete and abstract knowing is the goal of human development. Limiting or valuing certain states denies the postmodern, multidimensional contention that reality is collaborative experience among many

contexts (Libbrecht, 1997). Still, both Lane and Schwartz (1987) and Frosch (1995) purported that affect dysregulation occurs when an individual fails to progress toward more complex states of emotional experience throughout the lifespan and relies solely on immature emotional regulation processes. Ivey's theory of holistic development relates to the outcomes of this study in that development is based on holistic wellness and that cognitive, behavioral, and emotional development is seen as the goal of counseling (Ivey, 1996).

#### *Alexithymia, Trauma, and Affect Dysregulation*

Krystal (1988) contended that alexithymia occurs as an early failure in healthy affect regulation. Affect development is thought to begin in infancy and childhood, where the sensorimotor reflexive and sensorimotor enactive levels begin. Trauma is thought to de-regulate healthy emotional development, promoting more primitive forms of emotional experience and subsequently to enforce more compulsive behaviors such as eating disorders, substance abuse, or sexually acting out to fulfill a tendency to regulate emotions on a sensorimotor enactive emotional level. This trauma focus is based in psychoanalytic thought (object relations and self psychology) and uses research on attachment theory to make inferences into the theoretical process of emotional development dysregulation (Krystal; Taylor et al., 1997).

Object relations theory suggested that the emergence of self is a process that begins in infancy as a child attempts to regulate distressing emotions or affective states. In healthy infant development, the primary caregiver, responding to the child, organizes and regulates the emotional life of the infant (Stern, 1984). In turn, the child forms a sense of affective tolerance as the caregiver provides a sense of safety by relieving distress and mirroring positive emotion (Krystal, 1988).

As the use of language and symbolization starts, the child begins to gradually increase in his/her subjective emotional awareness and affect tolerance. The caregiver(s) in turn, in normal affect development, “teach words and meanings for the child’s somatic emotional experiences and other bodily experiences” (Taylor et al., 1997, p. 18). Thus begins the ability of the child to talk about and problem solve negative emotional experiences (Krystal, 1988). As the child grows into adulthood, “the verbalization of affects leads to new experiences and a growing awareness of more complex and differentiated emotional states” (Taylor et al., p. 18). Healthy affect development towards the formal operational affective level implies that this verbal feedback of the child’s emotional experience is validated and there is attention to responsiveness on part of the caregiver(s) (Krystal, 1988; Taylor et al.). Attachment theory research suggests that adults from securely attached childhoods use verbalization and processing of negative emotional experiences as a coping mechanism to validate successful behaviors (Krystal; Shaver & Brennan, 1992, Taylor et al.).

When individuals present affect dysregulated states, such as the alexithymia construct, there is typically an inability to verbalize subjective emotional states, or for the individual to verbalize complex affective states in others (Krystal, 1988). In addition, there is a tendency in alexithymic individuals to use disassociative or compulsive behaviors, such as substance abuse, eating disorders, or sexually acting out to physiologically change affective states. Taylor et al. (1997) and Krystal suggested that such failure to progress to concrete or formal operational affective development levels typically denotes trauma or disorganized attachment style on part of the caregiver(s). Again, there is a tendency for alexithymic individuals to process affective states as solely bodily sensations, which accounts for the high correlation between alexithymia and substance abuse disorders, somatoform disorders, and eating disorders.

## Wellness

Wellness is a broad concept having roots in many academic disciplines from medicine to psychology to the field of counseling. A connection among wellness, emotion, and physiological health has occurred in much medical research, especially in understanding psychosomatic phenomena (Taylor et al., 1997). Contemporary definitions of the wellness constructs have been the focus of considerable research, and research has increased in implementing wellness concepts into traditional medical model treatments (Vecchione, 1999). Research suggests that many fields are beginning to reassess all health service delivery in the light of empirical evidence into the application of the wellness construct (Vecchione). Thus, operationalized definitions of wellness emanate from many disciplines (Vecchione).

The origins of the concept of wellness began with the World Health Organization (WHO) in 1946, which set forth an initiative to redefine the concept of health and health promotion (Myers, et al., 2000). The 1946 definition of wellness by the WHO (Rikli & Jones, 1999) is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (Preamble to the Constitution of the World Health Organization, 1946). This model broadened the medical model perspective, and also introduced the idea of positive health, moving toward seeing health as dynamic and a multidimensional process.

Since 1946, many theorists have written about the value of viewing clients through the multidimensional wellness lens set forth by the WHO, particularly in many medical and psychological subfields such as health psychology, rehabilitation counseling, and psychoneuroimmunology (Hermon, 1995; Vecchione, 1999). A key component of wellness is the idea of "holism" or that wellness is "holistic," meaning the wellness orientation sees clients

in a sense of “oneness” influenced by the complex interaction of physiological, psychological, emotional, social, and spiritual processes” (Vecchione, p. 56).

### *The Wellness Model*

Outside of medical professions, holistic wellness concepts also have influenced the field of counseling, psychology, social work, and other helping professions most notably in the works of Jung and Adler (Hermon, 1995). Since 1980, the concept of wellness has been defined more concretely, beginning with Hettler’s six-dimension model. Hettler based his model on the mission statement for the University of Wisconsin at Stevens Point, which committed to providing students with intellectual, social, spiritual, occupational, physical, and emotional support (Hermon). From this commitment, Hettler with the National Wellness Institute began developing the TestWell instrument to measure these six dimensions (Connolly, 2000). Although the TestWell instrument signified the beginning of wellness measurement, the instrument was later found to have very weak validity due to a lack of consistency or reliability (Hermon).

Ardell (1988) also promoted a multidimensional construct of wellness, defining wellness as “a conscious and deliberate approach to an advanced state of physical and psychological/spiritual health” (p. 38). This definition promoted eight dimensions of wellness: psychological, spiritual, physical fitness, job satisfaction, relationships, family life, leisure time, and stress management (Ardell). This eight-dimension construct has no established measurement tool, yet is widely used in designing health promotion and education programs (Hermon, 1995).

Witmer and Sweeney (1992) have established another construct of wellness that occurs across the lifespan and is based in the field of counseling. Extending this work, Myers et al. (2000) have defined wellness as "a way of life oriented toward optimal health and well-being in

which body, mind and spirit are integrated in the individual to live more fully within the human and natural community" (p. 252). This definition is elaborated by Myers et al., (2000) in development of the Wellness Evaluation of Lifestyle (WEL, 2001), which was used to assess wellness in this study.

Connolly (2002) stated the Myers's et al. (2000) wellness model is expressed in five "life tasks: spirituality, self-direction, work, love, and friendship" (p. 56). The five tasks form the "Wheel of Wellness," which includes sixteen dimensions of wellness (Myers et al.). The sixteen dimensions are the four life tasks, plus twelve tasks that fall under the self-direction life task: (a) sense of worth, (b) sense of control, (c) realistic beliefs, (d) emotional responsiveness, (e) problem solving and creativity, (f) sense of humor, (g) nutrition, (h) exercise, (i) self-care, (j) stress management, (k) gender identity, (l) cultural identity (Myers et al.).

One can infer from the Wheel of Wellness, that when one component of the wheel is stressed or in dysfunction, the other components of the wheel must accommodate in balance or equilibrium, or the wheel could collapse. This understanding implies two major components of the wellness paradigm from which the construct is drawn. First, individual functioning occurs on a multidimensional, holistic level that not only includes psychological development, but lifespan physical adaptation and development, emotional adaptation and development, spiritual adaptation and development, socio-cultural adaptation and development, occupational adaptation and development, and relationship adaptation and development (Myers et al., 2001).

Second, balancing the many seemingly unassociated dimensions of a person's individuality is a necessary aspect of wellness. Thus, when using the Wheel of Wellness with substance abuse clients, clinicians may engage the client in discovering how a counseling issue fits and may affect other holistic aspects of an individual's wellness. In theory then client issues cannot be

isolated from each other, but are integrated, contextual, and engaged reciprocally (Myers et al., 2000).

The Wellness Model is a major force in the field of counseling and continues to define what is distinctive about the field of counseling in relation to other helping professions such as social work, psychology, and psychiatry (Remley & Herlihy, 2001). Currently, the wellness model as applied to substance abuse counseling seems directed mostly towards health promotion and public health policy (Hofford & Spelman, 1996). Clinical interventions in substance abuse counseling based on holistic wellness are mostly absent in the literature (Brooks, 2000).

Currently, there is an absence of research in using the Wellness Model in working with substance dependent clients. However, the Wellness Model as set forth by Myers et al. (2000) offers an exciting paradigm shift in the field of substance abuse counseling in that it offers a potentially more thorough and empathic developmental understanding of substance dependent clients. Traditionally, substance abuse interventions are either medical model based, or faith based (Galanter, 1991). Hester (1994), in a meta-analysis of more than 250 studies researching the effectiveness of various treatments for alcoholism, noted “the data indicate that there is no one treatment that is most effective” (p. 40). However, in the same article Hester stated that therapist “empathy” is an overwhelmingly “positive predictor for favorable outcomes” (p.40). If Hester is correct, the wellness model’s emphasis on holistic empathic understanding of client issues seems of great clinical value to the field of substance abuse counseling.

### Substance Dependence

Substance dependence affects millions of Americans every year. In 2005, the Substance Abuse and Mental Health Services Administration (SAMHSA) reported an estimated 19.7 million Americans were illicit drug users and that 22.2 million persons (9.1 % of the population)

were classified as suffering from substance dependence as based on the criteria for diagnosis in the *Diagnostic and Statistical Manual of Mental Disorders*, 4<sup>th</sup> edition (DSM-IV) (SAMHSA, 2005). Over 15 years ago, the cost of substance abuse to the U.S. economy was estimated at over \$177.4 billion (Group for the Advancement of Psychiatry, 1991; Taylor et al., 1997).

In terms of the cost to wellness, substance abuse is associated with increased rates of accidents and disease, higher rates of psychiatric disorders, and extended often into horrific adverse effects on children, families, and communities (Taylor et al., 1997). Defining the parameters of addiction, specifically the theoretical components of addiction, seems an important step in effective counseling of clients suffering from substance abuse issues.

### *Defining Substance Dependence*

Substance dependence, or what is referred to popularly as addiction, is comprised of several components. The substance of dependence need not be illegal, but can include alcohol, caffeine, and nicotine. Similar to more illicit drugs such as cocaine and heroin, these drugs can affect mood and behavior. Having a morning cup of coffee, smoking a cigarette, or having a drink all constitute substance use (Durand & Barlow, 1997).

Corresponding to addiction is the *DSM IV-TR* diagnosis for substance dependence. The following constitute the criteria for that diagnosis:

A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested three or more of the following occurring in a three-month period.

1. Tolerance, as defined by. . . need for markedly increased amounts of the substance to achieve intoxication. . . markedly diminished effect with continued use of the same amount of substance
2. Withdrawal



3. The substance is often taken in larger amounts than intended
4. There is a persistent desire and unsuccessful efforts to cut down or control use
5. A great deal of time is spent in activities necessary to obtain substance
6. Important social, occupational, or recreational activities are given up or reduced because of use
7. The use is continued despite knowledge of having a persistent or recurrent physical or psychological problem (American Psychiatric Association, 2000, p. 197).

The physiological reaction to substance use, which includes impairment, mood change, and restricted motor ability, refers to substance intoxication. One may be substance intoxicated without becoming substance dependent. Substance intoxication defines the actual use behavior and its associated physiological reactions. Substance dependence refers to a pattern of substance abuse that eventually fuels addiction. Defining substance abuse is more problematic in that the definition of what is abusive is set somewhat by legal and sociocultural standards (Durand & Barlow, 1997; Levin et al., 2001).

Use of substances to the point of intoxication does not necessarily suggest substance abuse, or dependence. Rather, substance abuse occurs when the substance intoxication demonstrates a pattern “ of clinically significant impairment or distress” leading to one or more of the following

1. Failure to fulfill major obligations at work, school, or home
2. Recurrent use in situations that are physically hazardous
3. Recurrent substance-related legal problems
4. Continued use despite having persistent social or interpersonal problems caused by or exacerbated by the effects of the substance (APA, 1994, 2000).

In contrasting substance abuse and substance dependence, substance dependence implies tolerance and physical and/or psychological withdrawal, while substance abuse implies a maladaptive pattern of substance use. Although one usually must meet the criteria for substance abuse to be considered substance dependent, the reverse does not hold true. Again, the main diagnostic difference between the two implies tolerance and withdrawal. The challenge for counselors and clients is to delineate where the substance use falls on a continuum of substance use, intoxication, abuse, and dependence (Durand & Barlow, 1997).

#### Alexithymia and Substance Dependence

Alexithymia and emotion seem to have a complex interrelationship with substance dependence according to the literature (Krystal, 1988). Traditionally, emotional development has been conceptualized as inseparable from cognitive development (Ellis, 2001; Ivey & Ivey, 1991). Recently, however, theorists are beginning to examine affective dimensions of individuals as possibly having a separate developmental continuum from cognitive development (Goleman, 1995, Greenberg, 1996; Lane & Schwartz, 1987; Taylor et al., 1997).

In general terms, emotions are thought to be cues for an individual to react to the environment (Krystal, 1993). For example, when a threat occurs in the environment one may feel fear, and therefore may flee the corresponding environmental stimulus. Taylor et al. (1997) proposed emotions have three main identifiable components: the neurophysiological process, the motor and behavioral process, and the cognitive-experiential process. Krystal (1988) has elaborated these modernist components and proposed that emotions have several more interrelated components. According to Krystal emotions are composed of a four-part schematic including the following: a cognitive message, a physiological expression, a hedonic sensation (various shades of feeling from pleasure to pain), and a behavioral response.

Krystal (1988) further noted that more complex affective states such as depression or anxiety carry these same interrelated components. Disorders of affect regulation occur when one of these emotional components ceases to function optimally (behavioral response, hedonic sensation, physiological expression, and cognitive message). Such dysfunction is thought to be brought on by trauma (Krystal; Taylor et al., 1997).

The field of substance abuse research suggests that substance dependence may be a symptom of a larger arrested emotional state, alexithymia (Taylor et al., 1997). This inability refers to a state of affectively experiencing the world in global, polarized affective states of either “good” or “bad” emotions. Alexithymic individuals have difficulty in distinguishing the nuanced emotional messages that allow individuals to communicate in complexity effectively. For example, the cognitive message for an individual experiencing depression may be partial responsibility for a feeling of loss. However, the individual may be unable to fully realize this message and therefore only feel physiological pain. One behavioral action to counteract this feeling would be introducing cocaine to turn about the unwanted physiological sensation (Taylor et al.).

As mentioned, Taylor et al. (1997) developed the 20-question Toronto Alexithymia Survey (TAS-20) as an assessment of the alexithymia construct. Research using the TAS-20 suggests that the normal rate for alexithymia in the general population is somewhere around 10% (Taylor et al.). The rate for alexithymia for substance abuse populations is suggested to be from 50% to 70% (Haviland, 1988). Some critics of the alexithymia construct have stated that alexithymia is a culture-bound construct promoting Western psychotherapy (Kirmayer, 1987; Prince, 1987). However, several studies using translations of the TAS-20 have showed adequate internal consistency (Taylor et al.). These studies include an Indian (Kannada dialect) translation (Sriram. Chatuvedi, Gopinath, & Subbakrishana, 1987), a Japanese translation (Miyaoaka, 1992), a

Spanish translation (Rodrigo & Luisardo, 1992) and a Czech translation (Kondas & Kordacova, 1990) among others.

Several studies using the TAS-20 also have shown that alexithymia is not a gender-based construct. A U.S. study (Haviland, 1988) found similar results on both female and male inpatient substance abusers, and no mean difference in scores after three weeks of sobriety. Much more research on females and the rate of alexithymia has been performed within the field of alexithymia and eating disorders. Cochrane, Brewerton, Wilson and Hodges (1993) found that females suffering from eating disorders had a significantly higher rate of alexithymia than samples of U.S. and Canadian female college students. In addition, Schmidt, Jiwany, and Treasure (1993) found eating disorders and alexithymia to not be significant based on gender. Finally, Loielle and Dawson (1988) and Parker, Taylor, and Bagby (1989) found no significant difference in gender when examining alexithymic populations. These studies suggest the TAS-20 (Taylor et al., 1997) does not demonstrate cultural or gender bias in the measurement of alexithymia.

#### *Research into Alexithymia in Substance Abuse Populations*

Bell and Khantzian (1991) contended that research on substance abuse populations has failed to identify a specific personality profile predicting substance dependency. However, Krystal (1988) and Taylor et al. (1997) suggested that the construct of alexithymia offers an intriguing new conception of the emotional dysregulation process that may make some individuals more prone to substance dependence. The idea of self-medication for painful emotions has been promoted as a process by which substance abuse clients escape these disturbances by use of drugs and/or alcohol (Khantzin, 1985). However, self-medication seems to conceptualize the process of addiction and not a larger dysregulated affective process

conceivably more pervasive (Taylor et al.). In other words, substance dependence is seen by many researchers as a symptom of the state of alexithymia, rather than alexithymia being a trait of substance dependence (Krystal, 1988; Taylor et al.).

Originally, alexithymia was constructed to understand psychosomatic disorders in which emotions were experienced as global, undifferentiated, and distinguishable to the individual as only physical ailments (Krystal, 1988). Krystal later extended this psychosomatic phenomenon to explain a larger complex process that integrates trauma, attachment dysfunction, and as an end result, alexithymia. To prove empirical evidence to this claim, several studies show an unusually high incidence of alexithymia among substance abuse populations.

Polish researchers (Rybakowski & Ziolkowski, 1990) found that 78% of 100 inpatient alcoholics were found to be alexithymic, although the patients presented no difference in socioeconomic or demographic factors. In the same study, no relationship was found between family history of dependence and alexithymia. A U.S. researcher (Haviland, 1988) found similar results on both female and male inpatient substance abusers, and no mean difference in scores after three weeks of sobriety. Results of a Finnish study in a community of approximately 2000 revealed a high correlation between alexithymia and alcohol consumption (Kauhanen, Julkunen, & Salonen, 1992). In a Canadian study, Taylor, Parker, and Bagby (1990) found that despite a week of abstinence, 50% of the patients obtained alexithymic scores. These studies suggest that alexithymia can be viewed not as a momentary personality state, but rather as a stable personality trait, potentially more pervasive than the substance abuse behavior.

Other current research into alexithymia as a stable trait, rather than a state of addiction provides compelling preliminary results. Haviland (1988) found no significant drop in alexithymia scores from the first day of hospitalization to six weeks of abstinence. Keller,

Carroll, Nich, and Rounsaville (1995) and Pinard, Negrete, Annable, and Audet (1996) found similar results in two other studies. The case for alexithymia being a stable trait in individuals, despite abstinence, seems to have interesting implications for substance abuse counselors.

### The Wellness Model and Substance Dependence

The alexithymia construct is firmly rooted in the medical model of psychiatry and psychology. However, the emphasis on seeing substance dependence as perhaps indicative of a greater alexithymic trait is supportive to the wellness model of counseling. The wellness model promotes holistic, multidimensional understanding of clients as a tool of client empowerment (Myers et al., 2001). Currently, most treatment approaches to substance abuse emphasize deficits, pathology, and diagnosis (Levin et al., 2001). Typically, treatment is substance abuse specific (Levin) or faith based (Galanter, 1991). Levin et al. pointed out that these treatment orientations are often directive, confrontational, and emphasize substance abuse as the target problem with less regard for the behavior as a symptom of something larger.

If the alexithymia construct is correct and can be extended to the wellness model, substance abuse can be viewed as poor coping behavior in regard to regulating emotions and overall holistic wellness. In other words, if overall emotional, physical, spiritual, and sociocultural wellness is the goal of substance abuse counseling, might the abuse behavior be diminished? Put more simply, perhaps substance abuse is not a personality deficit, but an ineffective wellness lifestyle choice. If the wellness model proposes using client responsibility, inherent strengths, and family and environmental resources to empower clients (Myers et al., 2000), might the same be extended to substance abuse populations? Although research is preliminary in terms of the alexithymia and wellness constructs, both ideas could suggest powerful new applied treatment options for substance abuse populations.

### *Wellness and Substance Dependence Counseling*

Although most treatment for substance dependence is based on the medical model, the wellness model seems to offer an interesting construct to add to treatment of addictions. Alexithymia seems to point to a larger picture of substance abuse clients having a diminished sense of overall wellness (Taylor et al., 1997). Wellness, including the propensity for making meaning from emotions, seems to be an important factor in how clients negotiate recovery (Levin et al., 2001). If affect development is a fundamental part of overall human development (Goleman, 1995; Krystal, 1988; Taylor et al.) a more thorough understanding of alexithymia as it applies to holistic wellness and recovery seems an exciting and practical aspect of future substance abuse counseling.

Traditionally, substance dependence counseling has focused on the pathology of addiction and exploring the deficits causing addiction as a means to rehabilitate clients suffering from substance abuse. Diagnosis and treatment paradigms in the rehabilitative view often emphasize assessment, confrontation in individual and group therapy about denial and defense mechanisms, and co-morbid pathology further complicating dependency (Levin et al., 2001). Although this treatment modality often has success, research suggests that focusing on client deficits, instead of client strengths, often can promote guilt and shame in relapse, lack of honesty in treatment, marginalization, and a sense of defensiveness among involuntary, adjudicated clients (Levin et al.)

A much different view, the wellness model, sees dependency as a lifestyle issue affecting multiple individual and environmental contexts. Managing these multiple contexts to promote overall wellness is the responsibility of the client and should focus on promoting holistic health instead of deficits as a means to successful recovery (Myers et al., 2000).

What specifically are the theoretical components of the wellness model's use with substance abuse populations? In general, the promise of the wellness orientation is to belie the negative outcomes of diagnosis and the medical model (Ivey & Ivey, 1991), to prevent potential for serious dysfunction, to use client strengths to facilitate therapeutic momentum, and to view health as a holistic connection between mind and body (Seligman, 1996). Education is emphasized throughout the concept of the wellness orientation. Drawing from counseling's roots in guidance counseling, educating about wellness is an attempt to both be instructive to an individual and provide self-efficacy and empowerment within larger community contexts (Smith & Robinson, 1995) of the substance abuse population.

The *DSM IV-TR* has been criticized historically in the counseling field for reducing clients to symptoms and not viewing clients as contextual beings (Smart & Smart, 1997). Libbrecht (1997) pointed out that the *DSM-IV*'s "atheoretical approach constitutes a theory in itself" ignoring "meanings patients attach to symptoms. . . and antecedents of a person's suffering (p. 25). In contrast, the wellness model of Myers et al. (2000) attempted to view substance abuse clients as contextual and fluid with substance dependence as only one aspect of a total person's individuality. Substance abuse is seen as treatable by empowering other aspects of the client (spirituality, family, community, health and stress management) to overcome the harmful substance using behavior (Levin et al., 2001; Myers et al.). McKenzie (1999) noted that little regard is given to cultural construction of normal and abnormal behavior within the medical model. Instead, client pathology is defined as a maladaptive response to external reality. The medical model of diagnosis is based on symptoms, not on etiological factors relating to cultural and developmental contexts in which client experience is defined within the wellness model (McKenzie). Further, the wellness model encourages clients to take an active role in shaping and



thereby changing their own reality and dysfunction by empowering them to use individual strengths to overcome the insidious nature of substance dependence (Levin, et al.).

Although the wellness model has been criticized for not being as clinically feasible as the traditional medical model (Levin, et al., 2001), in fact the *DSM IV* provides no treatment guidelines (Ivey & Ivey, 1991). Ivey and Ivey noted that within almost 900 pages of the *DSM IV* there are only four lines of text directly concerned with treatment options. The medical model, in fact, has long established a separation between diagnosis and treatment (Koerner, Kohlenberg, & Parker, 1996). Koerner et al. commented that diagnosis is ineffective if not actively linked to “problems, outcomes, and the proposed process for change” (p. 1170). Ivey contended that diagnosis in the medical model could perhaps become a potential barrier to client growth and change due to absences in linkages useful for the therapeutic process (Ivey & Ivey).

From this discussion, the wellness model proposed by Myers et al. (2000) seems to be an effective way of conceptualizing substance dependent clients outside of the potentially harmful aspects of the medical model. Diagnosis has been conceptualized outside of the narrow lens of the *DSM IV-TR* to include the more contextual and potentially accurate aspects of the wellness model by using the WEL (Myers et al, 2001). This assessment tool provides a much needed connection between theory and practice (Ivey & Ivey, 1991) and it seems to answer a common criticism of the wellness model in that it has few concrete clinical interventions based on the wellness orientation (Hinkle, 1998).

### *The Implications of Alexithymia for Substance Dependence Counseling*

Conceptualizing substance dependent clients through a lens of affect dysregulation can be helpful to counselors. First, alexithymia as related to substance dependence offers a clearer sense of the components of affect dysregulation. Counselors conceivably could process the

interrelated dimensions of affect in order to strengthen the overall functioning of a client (Krystal, 1988). Second, understanding the connection between alexithymia and substance dependence allows a counselor a broader, more contextual sense of the substance dependence behavior outside of the traditional behavior-focused and deficit-focused interventions currently used (Taylor et al., 1997). Third, alexithymia conceives of substance dependence and other personality disorders as symptomatic of a larger system of alexithymic experience based in trauma. This move from the deficit-focus of the medical model to the more empowering and empathetic stance of the trauma-focus of alexithymia seems to offer a more humane picture of substance dependent clients.

In summary, the alexithymia construct and its emphasis on trauma and dysregulation of emotion is a potentially compelling aspect of the future of substance dependence counseling. For counselors, understanding the complex interaction of trauma, emotion, and substance use seems necessary in order to fully understand clients contextually and design appropriate, effective clinical applications. In addition, alexithymia seems to offer much to the wellness orientation of counseling in that it promotes contextual understanding of many interrelated client issues, such as emotion, cognition, behavior, and overall human development. As researchers fully explore affective dimensions of substance use and the alexithymia construct, perhaps treatment options will expand and increase the rate of successful long-term recovery for substance dependent clients.

## **CHAPTER THREE**

### **METHODOLOGY**

This study examined the relationship between alexithymia, wellness, and substance dependence in substance dependent client and undergraduate sample populations. The relationships among these three constructs has been unexplored in the literature and may be helpful to informing substance abuse counselors, the counseling profession, and counselor educators. This chapter presents research questions and related hypotheses examining the relationship between these three constructs. Next, the participants and the data measurement tools are presented. Last, this chapter addresses the methods of data collection and analysis used in this study.

#### Research Design

This study was constructed as a posttest only, comparison group design. Research hypotheses in this study were evaluated by construction of four comparison groups from two sampled populations, substance dependent clients and undergraduates. All participants in this study were administered a survey comprised of an informed consent form, demographic questions, the TAS-20 (Taylor et al., 1997), and the WEL (Myers et al., 2001).

Two groups were constructed from adult clients in residential substance dependence treatment facilities in the New Orleans, Louisiana, and Austin, Texas, metropolitan areas. Substance dependent clients were divided into two groups based on their scores on the TAS-20 (Taylor et al., 1997). Those substance dependent clients who scored higher than 61 were grouped as having high alexithymic states. Those substance dependent clients who scored lower than 61 were grouped as having low alexithymic states. These scoring criteria are suggested in the TAS-20 documentation (Taylor et al.) and by previous research using the TAS-20 with substance

dependent populations (Haviland, Shaw, MacMurray, & Cummings, 1988; Keller, Carroll, Nich, & Rounsaville, 1995). In addition to the TAS-20, the Wellness Evaluation of Lifestyle (Myers, 2001) was used to measure total wellness scores and wellness subscale scores for substance dependent clients.

In addition to substance dependent clients, undergraduates at the University of New Orleans and the University of Texas at Austin also were sampled to create comparison groups to substance dependent groups and to make clearer inferences about the hypotheses of this study. Undergraduates were compared to substance dependent clients for two reasons. First, undergraduates were hypothesized logically as representing typical or above average human development and wellness by attending college. Second, undergraduates were convenient to the researcher as a comparison population to substance dependent clients.

Undergraduate participants were divided into two groups based on their scores on the TAS-20 instrument. Undergraduates were identified using the same alexithymic scoring procedures as with the substance dependent clients. In addition to the TAS-20, the Wellness Evaluation of Lifestyle was used to measure total wellness scores and wellness subscale scores for substance dependent clients. More detailed description of both of these instruments occurs later in this chapter.

Undergraduates were also asked demographic questions: if they had a history of substance abuse treatment, and if they found drug or alcohol use a problem in their lives (see Appendix B). Those undergraduates who indicated a history of substance abuse treatment history or that drug and/or alcohol use was a problem in their lives were excluded from the study.

From the samples, four comparison groups were formed, alexithymic substance dependent clients, non-alexithymic substance dependent clients, alexithymic undergraduates, and non-

alexithymic undergraduates. Four research questions and related hypotheses were examined based on these four comparison groups.

### Research Questions and Hypotheses

This study examined the following research questions:

**Research Question 1:** Do the total wellness scores for the non-alexithymic substance dependent group differ from the alexithymic substance dependent group?

**Research Hypothesis 1:** The total wellness scores for the non-alexithymic substance dependent group will be higher than the total wellness scores for the alexithymic substance dependent group.

**Research Question 2:** Are the total wellness scores of the non-alexithymic undergraduate group higher than the alexithymic undergraduate group?

**Research Hypothesis 2:** The total wellness scores for non-alexithymic undergraduate group will be higher than the total wellness scores for the alexithymic undergraduate group.

**Research Question 3:** Are the total wellness scores for the non-alexithymic group higher than the total wellness scores for the alexithymic group?

**Research Hypothesis 3:** The total wellness scores of the nonalexithymic groups will be higher than the total wellness scores of the alexithymic groups.

**Research Question 4:** Are there significant differences in the sense of worth, sense of control, realistic beliefs, and emotional responsiveness WEL subscales scores among each of the four groups?

**Research Hypothesis 4:** There are significant differences in the sense of worth, sense of control, realistic beliefs, and emotional responsiveness WEL subscales for each of the four groups.

## Variables

### *Independent Variables*

The independent variables in this study were alexithymia and substance dependence.

Alexithymia was used as an independent variable because it represents the best measure of the dysregulation of emotional development according to the literature (Taylor et al., 1997).

The second independent variable was substance dependence. There was no formal assessment of substance dependence due to time and financial constraints of the researcher. Traditionally, clients in substance abuse treatment settings are formally diagnosed with substance dependence in order to participate in the facilities' programs. In general, inpatient and intensive outpatient drug treatment programs work with clients or patients who exhibit symptoms characteristic of *DSM IV-TR* criteria suggesting substance dependence rather than substance abuse.

Undergraduate participants were asked questions regarding any current substance dependence behaviors, but no formal substance dependence measurement tool was given to college student participants. Those college student participants who identified as having a history of substance abuse treatment or that drugs and/or alcohol were a problem in their lives were excluded from this study.

Dillon, Turner, Robbins, and Szapocknik (2005) compared substance dependence measurements in the form of self-report, interview, and urine assays of the same sample and found that self-report measurements of substance dependence offered consistently valid and

reliable results. In addition, Weiss, Najavits, Greenfield, Soto, Shaw and Wyner (1998) found that self-reports of past drug use when comparing urine samples and self-reports were highly valid when assessing non-psychotic outpatients. Levin et al. (2001) reported that self-report measurements have been essential measurement tools of clinical and public health research into substance dependence for decades. Thus, the use of a self-report of drug use among sampled undergraduates seemed a practical method of measurement in this study. The distinctive theoretical and diagnostic differences between substance abuse and substance dependence have been outlined previously in Chapter One and Chapter Two.

#### *Dependent Variable*

The dependent variables for this study were the total wellness scores and the four wellness subscale scores of the respondents. The subscale scores included sense of control, realistic beliefs, emotional responsiveness, and stress management. The Wellness Evaluation of Lifestyle (WEL; Myers, Sweeney, Witmer, 2001) was used to determine wellness scores for this sample. The WEL, in my opinion, represents the best measure of wellness in the counseling profession at this time.

#### *Participants*

The populations of interest in this study were substance dependent individuals in New Orleans, Louisiana, and Austin, Texas, and undergraduate students at the University of New Orleans and the University of Texas at Austin. Substance dependent individuals were selected from drug treatment facilities that had either inpatient or intensive outpatient settings. The student participants were selected from undergraduate classes at the University of New Orleans and the University of Texas at Austin. The students were selected from a class that is

approximately representative of gender and ethnicity demographics in the normal college population.

The total sample size for undergraduate and substance dependent populations was  $n = 200$ . Two purposive sample groups of  $n = 50$  alexithymic individuals and  $n = 50$  non-alexithymic individuals were selected from the undergraduate populations. In addition, two groups of  $n = 50$  alexithymic substance dependent clients and  $n = 50$  non-alexithymic substance dependent groups were constructed.

The total sample size of  $n = 200$  was determined by recommended sample sizes in the research methodology literature (McMillan & Schumacher, 1997) and by time and financial constraints. Determination of sample size is negotiated between accurate representation of a population and realistic constraints of the researcher (McMillan & Schumacher). In terms of accurate representation of the sample, Hinkle, Wiersma, and Jurs (1998) suggested that four main factors should be used in determining sample size: “(1) level of significance, or Type I error; (2) power of the test; (3) effect size; and (4) directionality of the experimental hypothesis” (p. 337). An *a priori* determination of Type I error was set at  $\alpha = .01$ .

Statistical power refers to the ability of the sampling mean to show difference between groups. McMillan and Schumacher (1997) stated that it is “useful to increase power when sample size is low or when the researcher has reason to believe that the differences between the groups will be small” (p. 377). Power is computed  $1 - \beta$ , with a 4 to 1 ratio between  $\beta$  and  $\alpha$ . Therefore, power was computed as  $1 - 4(.05) = .80$ .

In general, effect size is the difference measured on a variable or “criterion” between an “experimental and a control group divided by the control group’s standard deviation” (McMillan



& Schumacher, 1997, p. 148). However, this study used a non-experimental, posttest only, comparison group design.

The effect size is the difference in wellness scores between alexithymic and non-alexithymic respondents. According to the literature, there are no specific mathematical guidelines for estimating effect size (Howell, 1997). Rather, Cohen (1988) has suggested arbitrary distinctions among low, medium, and high effect size. Cohen recommended a low effect size value of .20, a medium value of .50 and a high value of .80. The effect size for the samples in this study was estimated at .40, negotiated between .50, medium effect size, and .20, small effect size. An effect size of .40 demonstrates significance while also allowing for other interpersonal factors of the respondents that escape measurement and may influence statistical outcomes.

A demographic questionnaire asking respondents their age, culture of origin, gender, and socioeconomic level was included with the WEL and TAS-20 instruments. Research suggests that alexithymia occurs cross-culturally and in both male and female populations (Taylor, et al., 1997). Preliminary cross-culture and gender validity of the instrument specific to substance dependence has been demonstrated in Poland (Ziolkowski, Gruss, & Rybakowski, 1995), the United States (Haviland, Hendryx, Cummings, Shaw, & MacMurray, 1991), and Finland (Kauhnen, Julkunen, & Salonen, 1992). Research also suggests that the TAS-20 and the alexithymia construct are not culturally bound, but effective in diverse cultural settings such as populations in Japan, Africa, the Middle East, and Australia (Taylor et al.). Because the instrument presents itself in the literature as demonstrating effective use in many cultures for both male and female participants, samples were not set to specific constraints of gender or culture of origin.

## Instruments

Participants completed a questionnaire comprised of demographic questions, the WEL (Myers, et al., 2001) and the TAS-20 (Taylor et al., 1997).

### *The Wellness Evaluation of Lifestyle*

The Wellness Evaluation of Lifestyle, or WEL, was developed by Myers et al. (2001) at the University of North Carolina at Greensboro. The WEL attempts to measure 19 dimensions of wellness. The instrument contains 131 questions with 123 questions using a 5-point Likert scale and eight demographic multiple-choice questions. The eight demographic questions ask living alone, marital status, employment status, current involvement as a student, educational level achieved, occupational status, ethnic/cultural background, and size of city in which the respondent resides.

The authors of the WEL sub-divide the 19 dimensions of wellness into eight sub-categories termed “life tasks,” (Myers et al., 2001) which are the following: (a) spirituality, (b) self-regulation, (c) work, (d) leisure, (e) friendship, (f) love, (g) perceived wellness, and (h) total wellness. One subscale, the “self–regulation” life task subscale, contains eleven other subscales which are: (a) sense of worth, (b) sense of control, (c) realistic beliefs, (d) emotional responsiveness, (e) intellectual stimulation, (f) sense of humor, (g) nutrition, (h) exercise, (i) self-care, (j) stress management, (k) gender identity, and (l) culture identity.

This study used five scores from the WEL as dependent measures. These five scores are the total wellness score and four subscale scores: sense of worth, sense of control, realistic beliefs, and emotional responsiveness. The other wellness subscale scores were not used in this study. The four WEL subscale scores (sense of worth, sense of control, realistic beliefs, and emotional responsiveness) seem to best correspond to the components of the alexithymia construct. Myers

et al. (2001) have defined the sense of worth subscale as measuring satisfaction and acceptance with self. The sense of control subscale score is purported by the authors to measure beliefs about self-confidence, self-efficacy, locus of control, and perception of oneself as having influence through exercise of imagination. The realistic beliefs subscale is defined as measuring ability to perceive truth accurately, irrational beliefs and unrealistic expectations. Finally, the emotional responsiveness subscale is defined as measuring the ability to be in touch with feelings, be able to express feelings appropriately and a lack of negative emotional states.

I believe the WEL represents the best tool for measurement of the wellness construct. Although the WEL has not undergone extensive psychometric testing, the authors do present adequate data on reliability and validity to support its use as a research instrument.

#### *Reliability of the WEL*

Findings indicate that the WEL has good test-retest reliability. The test-retest reliabilities have been shown for the Total Wellness Score as  $r = .88, p < .001, n=99$  (Myers et. al., 2001). The subscales reflect  $r > .71$  for each of the subscale constructs. Internal reliability on the WEL was based on Cronbach's alpha, with  $r = .85, p < .001, n=99$  for the total wellness score and all of the subscales scoring  $r > .71$ , except for the leisure ( $r = .61$ ) and perceived wellness ( $r = .63$ ) subscale (Myers, et al., 2001). McMillan and Schumacher (1997) stated that scores above  $r = .65$  reflect a good reliability, in general.

#### *Validity of the WEL*

Validity has been defined as “an integrated evaluative judgment of the degree to which empirical evidence and theoretical rationales support the *adequacy* and *appropriateness of inferences* and *actions* based on test scores or other modes of assessment” (Messick, 1989, p. 13, in McMillan & Schumacher, 1997). The WEL authors (Myers et al., 2001) state that the WEL

has high convergent validity compared to other wellness measurements purporting to measure similar constructs such as the *Coping Resources Inventory* (Hammer & Marting, 1987) and *Testwell* (Hettler, 1983). Myers et al. (2001) report relatively high coefficient alphas for the WEL scales and subscales using test-retest design. Cronbach's coefficient alpha is thought to be a good measure of content validity and scores above  $r = .65$  reflect a good reliability, in general (McMillan & Schumacher, 1997).

The WEL Cronbach alpha coefficients for the total wellness score scale was .85. The alpha coefficient scores for the WEL subscale score used in this study are as follows: sense of worth,  $r = .79$ ; sense of control,  $r = .72$ ; realistic beliefs,  $r = .81$ ; and emotional responsiveness,  $r = .81$ . In addition, Myers et al. (2001) state that the WEL has face validity as established by review of expert panels in developing the instrument.

#### *The Toronto Alexithymia Scale-20*

The Toronto Alexithymia Scale-20 is a 20-question instrument designed to measure alexithymic traits in individuals (Parker et al., 1993). The instrument originally was developed in Toronto, Ontario, Canada, at the Department of Psychiatry at the University of Toronto and Mount Sinai Hospital in Toronto and the Department of Psychology at York University in Ontario, Canada. The scale purports to measure alexithymia, which is constructed of the following "three intercorrelated factors. . . (1) difficulty identifying feelings and distinguishing them from bodily sensations, (2) difficulty describing feelings to others, and (3) and externally oriented style of thinking" (Parker, et al., 1993, p. 221). The authors of the TAS-20 reported that individuals scoring at 61 and above on the TAS-20 can be identified as alexithymic. Those scoring below 61 on the TAS-20 can be identified as non-alexithymic (Parker et al., 1993).

### *Reliability of the TAS-20*

The authors of the TAS-20 (Bagby, Parker, & Parker, 1993), reported the reliability of the TAS-20 has been demonstrated through test-retest studies, factor analysis, correlation studies with five other personality trait scales, and cross-cultural validation. The authors state that the TAS-20 demonstrates good internal consistency (Cronbach's alpha = 0.81) and test-retest reliability over a three-week period ( $r = .77$ ), and a three-factor construct congruent with the alexithymia construct (Taylor, Bagby, & Parker, 1997).

### *Validity of the TAS-20*

In 1994, the TAS-20 was evaluated for concurrent validity in relation to other similar constructs in other personality trait instruments, such as the NEO Personality Inventory (Costa & McCrae, 1985), the Psychological Mindedness Scale (PMS), and the Affective Orientation Scale (AOS; Booth-Butterfield, 1990). The TAS-20 seems to correlate significantly with these instruments (Taylor et al., 1997) supporting its concurrent validity.

The support for the validity of the TAS-20 is largely descriptive and is based on factor analysis and correlational studies (Bagby et al., 1997). The authors of the TAS-20 (Taylor et al.) suggested that some psychologists “regard validation of descriptive features of a personality construct as a relatively weak type of validity, and consider it essential to produce experimental evidence that supports predictions” (Eysenck & Eysenck, 1985, p. 65, in Bagby et al., 1997). The authors therefore decided to broaden the validity for the TAS-20 using experimental construct validation of the instrument. In 1993, the TAS –20, along with several other measures of psychopathology was given to 131 participants in a psychiatric outpatient program in a hospital in Honolulu, Hawaii (Bagby, Parker, Taylor, & Acklin, 1993). Alexithymic patients were found to have more negative emotional states than non-alexithymic patients (Bagby et al., 1993).

Additionally, Taylor et al. (2000) cited two other studies (McDonald & Prkachin, 1990; Taylor et al., 1997) that have experimentally confirmed the construct validity of the TAS-20.

### Data Analysis

Data were examined in accordance with proposed hypotheses. Data on the demographic variables of the samples (gender, age, and ethnic background) were presented in order to describe the samples. An ANOVA on each independent variable for each group in relation to the dependent variable was used to test the hypotheses. All statistical procedures were calculated using SPSS 11.0 statistical package. The following are the research questions, hypotheses, and the corresponding data analysis procedures that were applied:

**Research Question 1:** Do the total wellness scores for the non-alexithymic substance dependent group differ from the alexithymic substance dependent group?

**Research Hypothesis 1:** The total wellness scores for the non-alexithymic substance dependent group will be higher than the total wellness scores for the alexithymic substance dependent group.

**Data Analysis:** Total wellness scores for the non-alexithymic substance dependent group were compared to the total wellness scores of the alexithymic substance dependent group using ANOVA.

**Research Question 2:** Are the total wellness scores of the non-alexithymic undergraduate group higher than the alexithymic undergraduate group?

**Research Hypothesis 2:** The total wellness scores for non-alexithymic undergraduate group will be higher than the total wellness scores for the alexithymic undergraduate group.

- Data Analysis:** The total wellness scores for the non-alexithymic undergraduates were compared to the total wellness scores for alexithymic undergraduates using ANOVA.
- Research Question 3:** Are the total wellness scores for the non-alexithymic group respondents higher than the total wellness scores for the alexithymic group respondents?
- Research Hypothesis 3:** The total wellness scores of the non-alexithymic group will be higher than the total wellness scores of the alexithymic group.
- Data Analysis:** The total wellness scores of the WEL for the non-alexithymic group were compared to the total wellness scores for the alexithymic group respondents using ANOVA.
- Research Question 4:** Are there significant differences in the sense of worth, sense of control, realistic beliefs, and emotional responsiveness WEL subscales scores for each of the four groups?
- Research Hypothesis 4:** There will be significant differences in the sense of worth, sense of control, realistic beliefs, and emotional responsiveness WEL each of the four groups.
- Data Analysis:** The wellness subscale scores of sense of worth, sense of control, realistic beliefs, and emotional responsiveness on the WEL were compared in all four groups using an ANOVA.

## CHAPTER FOUR

### RESULTS

This chapter includes the data analysis for the research questions of this study. Overall, the study examined the relationship of alexithymia and wellness in two sample groups, substance dependent clients and undergraduate students. In order to make inferences about the proposed research questions a survey was developed comprised of demographic questions, the TAS-20, and the WEL (see Appendix A). Both the TAS-20 and the WEL are discussed in Chapter 3. Data for this study were analyzed using the SPSS version 11.0 statistical software package. Descriptive and ANOVA statistics were completed in order to test the research hypotheses of the study.

#### Characteristics of the Sample Populations

Two populations were sampled, substance dependent clients and undergraduate students. Originally, populations were sampled from the New Orleans, Louisiana area. Due to the after-effects of Hurricane Katrina in 2005 and the researcher's relocation, substance dependent clients were also drawn from inpatient substance dependence treatment centers in Austin, Texas. Additionally, undergraduate sample population subjects were drawn from the University of New Orleans and the University of Texas at Austin.

A total sample of  $n = 200$  participants were used for the construction of four groups, each group constructed with a size of  $n = 50$ . Participants were grouped based on their alexithymia score on the TAS-20 and as being identified as either undergraduates or substance dependent clients. Four groups were formed from the total  $n = 200$  sample: alexithymic undergraduates, non-alexithymic undergraduates, alexithymic substance dependent clients, and non-alexithymic substance dependent clients. Groups were constructed at the size of  $n = 50$  based on the power



guidelines set forth by Cohen (1988) and in order to make inferences about the research questions (see Table 1).

Table 1

*Construction of Comparison Groups*

Group	Group Abbreviation	n
Alexithymic Undergraduates	AU	50
Non-Alexithymic Undergraduates	NAU	50
Alexithymic Substance Dependent Clients	ASDC	50
Non-Alexithymic Substance Dependent Clients	NASDC	50
Total	4	200

*Characteristics of the Undergraduate Sample Population*

Undergraduate participants came from both the University of New Orleans and the University of Texas at Austin. An ANOVA comparison was calculated to determine if there were significant difference in total WEL scores between the two undergraduate samples based on the university which they attended. The mean total WEL scores for the University of New Orleans students was  $M = 72.65$ ,  $SD = 11.62$ . The mean total wellness score for the UT students was  $M = 71.07$ ,  $SD = 8.58$ . An ANOVA comparison of wellness scores from students at the University of New Orleans and University of Texas at Austin was calculated. No significant difference was found in total WEL scores between the two student groups based on which university the students attended ( $p = .45$ ) at the  $p < .05$  level,  $F(1, 95) = .45$  (see Table 2).

Thus, the two student groups from the University of New Orleans and the University of Texas at Austin were deemed equivalent for the purposes of this study.

Table 2

*ANOVA Comparison of University Attended with Total WEL Scores as the Dependent Variable*

University Attended	<i>M</i>	<i>SD</i>	<i>MS</i>	<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
University of New Orleans	72.65	11.62		1			
University of Texas at Austin	71.07	8.58		1			
Between Groups			60.01	1	.58	.58	.45
Within Groups			103.02	94			

*Gender Characteristics of the Sample Population*

Participants were asked their gender, ethnic background, and age. Frequency distributions for gender appear in Table 3. The majority of the respondents were women (68%), which is representative of undergraduate populations, but is not representative of female substance abuse populations in treatment in the U.S. (32%) as reported by a Substance Abuse and Mental Health Services Administration (SAMHSA) report in 2005. As the TAS-20 (Levin et al., 2001) and the WEL (Myers, 2001) are promoted as free of gender-bias in measurement, the preponderance of female respondents did not seem to be a limitation of the research.

Table 3

*Frequency Distribution of Respondents by Gender*

Group	Male <i>F</i>	Female <i>F</i>	Male %	Female %		
AU	17	33	9	17		
NAU	12	36	6	18		
ASDC	28	21	14	11		
NASDC	9	44	5	22		
Total	66	134	200	34	68	100

*Ethnicity Characteristics of the Sample Population*

In addition to gender, respondents were asked their ethnic background. Frequencies for ethnic background in the four comparison groups as a total sample appear in Table 4. No students identified themselves as “Alaskan Native.” Two percent of total respondents identified themselves as “Native American” and 5% of respondents identified themselves as “Asian or Pacific Islander.” Seventeen percent of respondents identified themselves as “African American” and 58% of respondents identified themselves as “Caucasian.” Twelve percent of respondents identified themselves as “Latino/Latina” and 1% identified themselves as “Other.” Two percent gave no response when asked their ethnic identity.

Table 4

*Frequency Distribution of Respondents by Ethnicity*

Ethnicity	AU	%	NAU	%	ASDC	%	NASDC	%	Total <i>F</i>	Total %
Native American	0	0	0	0	1	1	2	1	3	2
Alaskan Native	0	0	0	0	0	0	0	0	0	0
Asian or Pacific Islander	7	4	2	1	0	0	0	0	9	5
African American	12	6	16	8	6	3	0	0	34	17
Caucasian	23	12	20	10	30	15	43	22	116	58
Latino / Latina	6	03	6	3	8	4	4	2	24	12
Other	1	1	2	1	4	2	3	1	10	5
No Response	2	1	1	1	1	1	0	0	4	2
Total Number	51		47		50		52		200	
Total Percent		26		24		25		26		100

Note: "AU" denotes Alexithymic Undergraduates, "NAU" denotes Non-alexithymic Undergraduates, "ASDC" denotes "Alexithymic Substance Dependent Clients, "NASDC" denotes Non-alexithymic Substance Dependent Clients.

*Age Characteristics of the Sample Population*

The mean age for all respondents was 27.9. The mean age for the combination of the two undergraduate comparison groups was 20.6. The mean age for substance dependent client groups was 35.1. According to the literature, the construct of alexithymia is a stable trait across human development (Parker et al., 1989) and therefore probably should not be influenced by the 15-

years mean difference between undergraduates and substance abuse populations. Wellness as measured by the WEL (Myers et al., 2001) is a developmental state that changes across the lifespan due to the variety of factors as discussed in Chapter 3. Distribution of age scores appears in Table 5.

Table 5

*Frequency Distribution of Respondents by Age*

AGE	AU	NAU	ASDC	NSDC	ALL GROUPS
Minimum	18	18	17	18	17
Maximum	29	46	52	58	58
Mean	19.70	21.50	35.50	34.70	27.90
Standard Deviation	2.22	4.85	9.90	9.5	10.33
Median	19	35	36	36	26
Total Number	51	49	49	51	200

Note: "AU" denotes Alexithymic Undergraduates, "NAU" denotes Non-alexithymic Undergraduates, "ASDC" denotes "Alexithymic Substance Dependent Clients, "NASDC" denotes Non-alexithymic Substance Dependent Clients.

Tests of Hypotheses

*Type I and Type II Error*

In social science research, ANOVA results typically are set with an alpha level of .05 (Norusis, 2006). Type I error occurs when a researcher rejects a null hypothesis (e.g., there are no differences among the comparison groups) when in fact the null hypothesis is true. There is an increased risk of finding significant results that occur by chance when using an ANOVA to make multiple comparisons from the same sample population. Because each research question

was analyzed by using a one-way ANOVA, a  $p < .0$  level was set for each ANOVA comparison (Norusis, 2006) to control for the inflated alpha level.

Type II error is inversely related to Type I error. Type II error occurs when sample groups are too small to find statistically significant results. This error is also understood as not having adequate statistical power (Cohen, 1988) in that the effect size of the sample is too small to identify statistical differences (Pallant, 2005).

Alpha levels were set at .01 so that significance found by chance in the ANOVA comparisons would be reduced. Eta squared was computed to find the effect size of all ANOVA comparisons. Eta squared calculates effect size by dividing the between groups sum of squares by the total sum of squares established by the ANOVA comparison (Pallant, 2005). This Eta squared calculation can then be compared to Cohen's (1988) suggested guidelines for effect size with .01 suggested as a small effect size, .06 as a medium effect size, and .14 as large effect size (Pallanter, 2005). Eta squared is represented as  $\eta^2$  when used in tabular form in this chapter.

### *Research Question 1*

Do the total wellness scores for non-alexithymic substance dependent group differ from the total wellness scores for the alexithymic substance dependent group?

### *Data Analysis of Research Question 1*

The total wellness scores for the alexithymic substance dependent group were compared to the total wellness scores of the non-alexithymic substance dependent group using ANOVA.

### *Test of Hypothesis 1*

Research Hypothesis 1 predicted total wellness scores on the WEL for non-alexithymic substance dependent group would be higher than the total wellness scores on the WEL for the alexithymic substance dependent group. Mean total wellness scores for the non-alexithymic

substance dependent group ( $M = 72.20, SD = 8.91$ ) were higher than the total wellness scores for the alexithymic substance dependent group ( $M = 68.29, SD = 9.40$ ). The mean group difference between the substance dependent groups was 3.91. As presented in Table 6, an ANOVA showed a significant difference in total wellness scores between alexithymic and non-alexithymic substance dependent groups when tested at the  $p < .01$  level,  $F(1, 92) = 8.61$  ( $p = .00$ ). Research Hypothesis 1 was supported.

Table 6

*ANOVA Results for Alexithymic and Non-Alexithymic Substance Dependent Groups with Total WEL Scores as the Dependent Variable*

Source	<i>MS</i>	<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
Between Groups	733.78	1	8.61	.09	.00*
Within Groups	85.25	91			

Note: *p* was calculated as  $p < .0001$ .

*Research Question 2*

Are the total wellness scores for the alexithymic undergraduate group higher than the total wellness scores for the non-alexithymic undergraduate groups?

*Data Analysis for Research Question 2*

The total wellness scores of the WEL for the alexithymic undergraduates were compared to the total wellness scores of the WEL for the non-alexithymic group using ANOVA.

*Test of Hypothesis 2*

Research Hypothesis 2 predicted that total wellness scores on the WEL for the non-alexithymic undergraduate group would be higher than the total wellness scores on the WEL for

the alexithymic undergraduate group. Mean total wellness scores for the non-alexithymic undergraduate group ( $M = 77.15, SD = 6.71$ ) were higher than the mean total wellness scores for the alexithymic undergraduate group ( $M = 68.25, SD = 9.22$ ). The mean group difference between the undergraduate groups was 8.90. An ANOVA showed a significant difference in total wellness scores between alexithymic and non-alexithymic undergraduate groups when tested at the  $p < .01$  level,  $F(1, 94) = .29.35$  ( $p < .0001$ ). Research Hypothesis 2 was supported. The results are presented in Table 7.

Table 7

ANOVA Results for Alexithymic and Non-Alexithymic Undergraduate Groups with Total WEL Scores as the Dependent Variable

Source	<i>MS</i>	<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
Between Groups	1877.53	1	29.35	.19	.00*
Within Groups	63.98	93			

Note:  $p$  was calculated as  $p < .0001$ .

### *Research Question 3*

Are the total wellness scores for the non-alexithymic group higher than the total wellness scores for the alexithymic group?

#### *Data Analysis for Research Question 3*

The total wellness scores of the WEL for the alexithymic group respondents were compared to the total wellness scores for the non-alexithymic group respondents using ANOVA.



### *Test of Hypothesis 3*

Research Hypothesis 3 predicted total wellness scores on the WEL would be higher in the non-alexithymic group than in the alexithymic group. Mean total wellness scores for the non-alexithymic group respondents ( $M = 75.22$ ,  $SD = 7.97$ ) were higher than the total wellness scores for the alexithymic group respondents ( $M = 67.12$ ,  $SD = 9.33$ ). The mean group difference between the non-alexithymic and the alexithymic group was 8.10. An ANOVA presented in Table 7 showed a significant difference in total wellness scores between the alexithymic and non-alexithymic groups when tested at the  $p < .01$  level,  $F(1, 187) = 39.49$ , ( $p < .0001$ ). Research Hypothesis 3 was supported.

### *Research Question 4*

Are there significant differences in WEL subscales scores (sense of control, realistic beliefs, emotional responsiveness, and sense of worth) for each of the four comparison groups?

### *Data Analysis for Question 4*

The WEL subscale scores were compared for all four groups using a post hoc Bonferroni ANOVA with the alpha level set at  $p < .01$ .

### *Test of Hypothesis 4*

Research Question 4 stated there were differences in WEL subscale scores (sense of control, realistic beliefs, emotional responsiveness, and sense of worth) among the four comparison groups. As mentioned in Chapter 3, these wellness subscales were compared as they best represent the components of the alexithymia construct. In fact, significant differences were found on all subscale scores among the four comparison groups. Results for the ANOVA comparisons are included in Table 9.

The sense of control WEL subscale score showed a significant difference  $F(1, 202) = 15.28$  (sig. = .00) for the four comparison groups ( $M = 69.36$ ,  $SD = 12.90$ ) when tested using a Bonferroni ANOVA comparison at the  $p < .01$  level. The mean realistic belief WEL subscale score showed a significant difference  $F(1, 202) = 3.96$  ( $p < .0001$ ) for the four comparison groups ( $M = 53.92$ ,  $SD = 14.06$ ) when tested using a Bonferroni ANOVA comparison at the  $p < .01$  level.

The emotional responsiveness WEL subscale score showed a significant difference  $F(1, 202) = 28.23$  ( $p < .0001$ ) for the four comparison groups ( $M = 70.79$ ,  $SD = 14.25$ ) when tested using a Bonferroni ANOVA comparison at the  $p < .01$  level. The sense of worth WEL Subscales showed a significant difference  $F(1, 202) = 14.55$  ( $p < .0001$ ) for the four comparison groups ( $M = 78.06$ ,  $SD = 15.87$ ) when tested using a Bonferroni ANOVA comparison at the  $p < .01$  level.

The mean score for the sense of control WEL subscale score for the NASDC group was 68.08 ( $SD = 10.79$ ) and for the ASDC group the mean score was 66.64 ( $SD = 14.72$ ). The mean sense of control WEL subscale score for the NAU group was 63.12 ( $SD = 14.93$ ) and the mean score for the AU group was 79.61 ( $SD = 11.15$ ). ANOVA results at the  $p < .01$  level comparing the sense of control WEL subscale scale showed significant differences among the comparison groups ( $p < .0001$ )

The mean realistic belief WEL subscale score for the NASDC group was 50.06 ( $SD = 12.39$ ) and the mean score for the ASDC group was 55.80 ( $SD = 14.28$ ). The mean realistic beliefs subscale score for the NAU group was 51.33 ( $SD = 15.21$ ) and the mean subscale score for the AU group was 58.50 ( $SD = 14.35$ ). ANOVA results at the  $p < .01$  level comparing the realistic beliefs WEL subscale scale showed significant differences among the four comparison groups ( $p < .0001$ ).

The mean emotional responsiveness WEL subscale score for the NASDC group was 65.83 ( $SD = 13.49$ ) and the mean score for the ASDC group was 69.13 ( $SD = 13.01$ ). The mean score on emotional responsiveness WEL subscale for the NAU was 63.80 ( $SD = 15.25$ ). The mean score for the AU was 84.71 ( $SD = 15.25$ ). ANOVA results at the  $p < .01$  level comparing the emotional responsiveness WEL subscale scale showed significant differences among the comparison groups ( $p < .01$ ).

The mean score for the sense of worth WEL subscale for the NASDC group was 73.23 ( $SD = 14.90$ ) and the mean score for the ASDC was 77.12 ( $SD = 18.59$ ). The mean score on the sense of worth WEL subscale score for NAU group was 71.28 ( $SD = 19.89$ ) and the mean score for the AU group was 90.59 ( $SD = 10.08$ ). ANOVA results at the  $p < .01$  level comparing the sense of worth WEL subscale scale showed significant differences among the comparison groups ( $p < .0001$ ).

Research Hypothesis 4 predicted significant differences in the four WEL subscale scores among the four comparison groups. ANOVA results using a Bonferroni comparison found significant differences in the WEL subscale scores among the four comparison groups. Hypothesis 4 was supported.

Table 8

ANOVA Results of Four WEL Subscale Scores Tested as Dependent Variables

Item	Source	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
Sense of Control Subscale Score	Between Groups	69.36	12.90	1	15.28	.19	.00
	Within Groups			202			

Table 9 continued

Realistic Beliefs Subscale Score	Between Groups	53.92	14.06	1	3.96	.06	.01
	Within Groups			202			
Emotional Responsiveness Subscale Score	Between Groups	70.79	14.25	1	28.23	.30	.00
	Within Groups			202			
Sense of Worth Subscale Score	Between Groups	78.06	15.87	1	14.55	.18	.00
	Within Groups			202			

### Summary

This chapter presented the results of the research hypotheses in this study. The main purpose of this study was to examine the relationship between wellness and alexithymia in substance dependent and undergraduate groups. Measurement was conducted by use of a questionnaire consisting of demographic questions (gender, ethnicity, age) and by use of WEL (Myers et al., 2001) and TAS-20 instruments (Parker et al., 1989). Four comparison groups were formed from two samples, substance dependent clients and undergraduates. The four samples consisted of alexithymic undergraduates, non-alexithymic undergraduates, alexithymic substance dependent clients and non-alexithymic substance dependent clients. Each comparison group consisted of n = 50 participants for a total of n = 200 respondents. All research hypotheses were

examined using Bonferroni ANOVA comparisons set at the  $p < .01$  level to control for Type I and Type II error.

The first research question anticipated a difference in total wellness scores for alexithymic substance dependent clients and non-alexithymic substance dependent clients. Total wellness scores were found to be significant based on whether substance dependent clients were alexithymic or non-alexithymic. Hypothesis 1 was supported (see Table 6).

The second research question expected a difference in total wellness scores when comparing alexithymic and non-alexithymic undergraduate groups. ANOVA results comparing alexithymic and non-alexithymic undergraduate groups showed significant differences ( $p = .00$ ) when total wellness scores were tested as the dependent variable at the  $p < .01$  (see Table 7). Hypothesis 2 was supported.

The third research question proposed a significant difference in total wellness between the combined undergraduate and substance dependent alexithymic groups and the combined undergraduate and substance dependent non-alexithymic groups. ANOVA results comparing combined alexithymic groups to combined non-alexithymic groups showed significant differences ( $p = .00$ ), when total wellness scores were tested as the dependent variable (see Table 8). Hypothesis 3 was supported.

The fourth research question anticipated significant differences in the WEL subscales scores (sense of control, realistic beliefs, emotional responsiveness, and sense of worth) among the four comparison groups. Bonferroni ANOVA comparisons found significant differences in the four WEL subscale scores among the four groups. Hypothesis 4 was supported.

Chapter 5 discusses the findings from this chapter. A comparison of the findings and existing research is presented as well as information about the research limitations of this study. Chapter 5 concludes with a discussion of this study's implications for further research.

## CHAPTER FIVE

### DISCUSSION

Chapter Five includes a discussion of the purposes and findings of this study. Next, limitations of the study are presented as well as a discussion of the findings as applied to current research. This chapter concludes with implications for clinicians and counselor educators and a discussion of recommendations for future research.

#### Purposes of the Study

The primary purpose of this study was to examine the relationship between alexithymia and total wellness in substance dependent and undergraduate sample groups. There exists little research on using the construct of wellness in substance abuse counseling settings. Additionally, there is an absence of research in the use of the alexithymia construct in the literature of counseling and counselor education. This study examined the relationship of alexithymia and wellness in order to inform counselors and counselor educators. A secondary purpose of this study was to examine how the findings on the relationship between alexithymia and wellness can be applied to specific treatments for substance dependent clients.

#### Discussion of the Findings

##### *Hypothesis 1*

Hypothesis 1 stated that the non-alexithymic substance dependent group would have a higher total wellness score than the alexithymic substance dependent group. In fact, non-alexithymic substance dependent individuals did have a higher total wellness score ( $M = 72.20$ ,  $SD = 8.91$ ) than the alexithymic substance dependent group ( $M = 68.29$ ,  $SD = 9.40$ ) and total wellness scores were found to be significantly different based on a Bonferroni ANOVA comparison set at  $p < .01$  level,  $F(1, 92) = 8.61$  ( $p < .0001$ ) for the two groups (see Table 6).

Although both alexithymic and non-alexithymic groups were substance dependent, their overall wellness scores had a negative relationship based on association with alexithymic status.

From these results one may infer that alexithymic state is perhaps an important factor for clinicians to consider in increasing overall wellness with substance dependent clients. Currently, the majority of substance dependence treatment orientations are substance abuse specific, meaning that treatment focuses on substance abuse as the main cause of addiction. Prior research suggests that this treatment orientation can lead to shame and guilt in treatment and to traditionally high multiple relapse outcomes (Galanter, 1991).

The results from Hypothesis 1 suggest that alexithymia, or poor emotional development, has a negative relationship to overall wellness among the substance dependent groups. As mentioned in previous chapters, perhaps a more empathetic and accurate depiction of individuals suffering from substance dependence is the use of the alexithymia construct in order to treat the potentially more pervasive emotional dysregulation of the alexithymic state. Results that support Hypothesis 1, suggest that substance dependence might be best understood as an unhealthy wellness behavior potentially rooted in being alexithymic.

### *Hypothesis 2*

Hypothesis 2 stated that total wellness scores would be higher for the non-alexithymic undergraduate group than for the alexithymic undergraduate group. In fact, the non-alexithymic undergraduate group had higher total wellness scores than the alexithymic undergraduate group. Total wellness scores for the non-alexithymic undergraduate group ( $M = 77.15$ ,  $SD = 6.71$ ) were found to be significantly different than the alexithymic undergraduate group ( $M = 68.25$ ,  $SD = 9.22$ ) when tested with a Bonferoni ANOVA comparison at the  $p < .01$  level,  $F(1, 94) = 29.35$  ( $p < .0001$ ) (see Table 7).



Like the substance dependent comparison groups, wellness scores for the undergraduate groups were found to have a negative relationship to alexithymia status. This finding is supportive of the emotional development construct of alexithymia being a potentially significant dimension of overall wellness. Undergraduates in the study were given no formal assessment for substance dependence. However, participants were asked if they had attended substance abuse treatment, or found that use of alcohol or drug use was a problem in their lives (see Appendix B).

Two theoretical ideas are supported with this finding. First, emotional regulation as measured by the alexithymia construct perhaps influences overall wellness. Second, if increasing overall wellness is the goal of counseling, focus on improving emotional regulation seems a necessary goal.

### *Hypothesis 3*

Hypothesis 3 stated that non-alexithymic groups would have higher total wellness scores than the alexithymic groups. The total wellness scores of non alexithymic respondents ( $M = 75.22, SD = 7.97$ ) were found to be higher than non-alexithymic respondents ( $M = 67.12, SD = 9.33$ ). Total wellness scores had a negative relationship when compared to alexithymia status using a Bonferroni ANOVA comparison set at the  $p < .01$  level,  $F(1, 187) = 39.49 (p < .0001)$  (see Table 8).

The significant Bonferroni ANOVA comparison results set at the  $p < .01$  level offer additional evidence that overall wellness has a significant relationship with alexithymic status, apart from substance dependency. In other words, perhaps emotional development as measured by alexithymic status should be understood as an important dimension of overall wellness for many potential counseling clients. If clinicians use the WEL as an assessment of overall

wellness, additional assessment of alexithymic status seems a practical decision in that it has a significant relationship to overall wellness.

#### *Hypothesis 4*

The fourth research hypothesis anticipated significant differences in the WEL subscale scores (sense of control, realistic beliefs, emotional responsiveness, and sense of worth) for each of the four comparison groups. In fact, each of the WEL subscale scores had a significant and negative relationship to overall wellness. These four subscales of the WEL were chosen to make a Bonferroni ANOVA comparison at the  $p < .01$  level, due to their description by the authors of the WEL (Myers et al., 2001) as having the most similarity to the criterion of the alexithymia construct. In other words, the WEL subscales were used as an additional measurement of emotional dysregulation and it was found that scores on the WEL subscales had a negative, significant relationship to overall wellness. This result offers additional evidence that higher emotional development has a potentially positive relationship to increasing overall wellness.

The sense of control subscale has been defined by the WEL authors (Myers et al., 2001) as a measure of beliefs about self-confidence, self-efficacy, locus of control, and perception of oneself as having influence on others. This subscale seems to be similar to the alexithymia construct criterion of alexithymic individuals having a “stimulus-bound, externally oriented cognitive style (Taylor et al., 1997, p. 29).”

The realistic belief WEL subscale has been defined as measuring the ability to perceive truth accurately, irrational beliefs, and unrealistic expectations (Myers et al., 2001). This seems to be similar to the alexithymia criterion of “constricted imaginal processes” and “a stimulus-bound, externally-oriented cognitive style (Taylor et al., 1997, p. 29).”

The emotional responsiveness WEL subscale has been defined by Myers et al. (2001) as assessing the ability to be in touch with feelings, be able to express feelings appropriately, and a lack of negative emotional states. The emotional responsiveness WEL subscale seems to be most similar to the alexithymia criterion of “difficulty identifying feelings and distinguishing between feelings and bodily sensations of emotional arousal” and “difficulty describing feelings to other people (Taylor et al., 1997, p. 29).”

The sense of worth WEL subscale has been defined by the authors (Myers et al., 2001) as assessing satisfaction and acceptance with self. This subscale seems to have an additional general similarity to both alexithymia criteria of “constricted imaginal processes” and “a stimulus-bound, externally oriented cognitive style (Taylor et al., 1997, p. 29).”

All four subscales tested showed significant difference among the four comparison groups based on group categorization as either alexithymic or non-alexithymic. Comparison of the WEL subscales in relation to the alexithymia criterion seems to present additional evidence that wellness has a significant relationship to alexithymia and that the individual criteria of alexithymia do correspond to specific subscales of the WEL.

Currently, the WEL does not have a sole measure of emotional development. Yet, emotional development seems to be vaguely referenced as an important aspect of overall wellness (Myers et al., 2000). In fact, the WEL seems to follow the traditional idea that emotional development is secondary to cognitive and behavioral development (Krystal, 1988). Numerous WEL subscales measure aspects of cognitive development (sense of worth, sense of control, realistic beliefs, intellectual stimulation, perceived wellness), or behavioral development (work, leisure, friendship, love, spirituality, self-care, stress management), or multicultural development (gender identity, culture identity). Only the emotional responsiveness subscale seems to offer a measure

the breadth of emotional development. Assessment of emotional development seems an important and necessary aspect of overall holistic wellness.

The alexithymia construct seems to be the best current measure of emotional development (Taylor et al., 1997). Because alexithymic status seems to have a significant relationship to wellness in all four research hypotheses in this study, perhaps the additional use of the TAS-20 with the WEL can offer a more succinct and thorough understanding of the emotional development dimension of overall wellness for potential counseling clients.

### Limitations

The sample for this study included substance dependent adults in residential treatment in the New Orleans, Louisiana, and Austin, Texas, metropolitan areas, and undergraduate students at the University of New Orleans and the University of Texas at Austin. Although undergraduate respondents came from two different universities, ANOVA results comparing the two groups found no significant difference in the undergraduates based on the university they were attended (see Table 2).

Pryczak and Bruce (1988) defined a limitation as a “weakness or handicap that potentially limits the validity of results” (p. 57). The limitations of this study include:

1. The respondents in this study did not necessarily represent all adult substance dependent clients. Because the measurement tools required literacy, respondents seem represented a specific level of literacy needed in order to complete the instruments.
2. Some participants may not have responded accurately to the questions. There may have been a tendency for some participants to give socially acceptable answers or to give false answers in retaliation for their treatment circumstances or the need to present themselves in a positive manner.

Undergraduate participants were not given a formal assessment of substance dependence. Rather, students were asked if they had a history of substance abuse treatment and if alcohol or substance abuse was a problem in their lives (see Appendix B). Those undergraduates who answered as having a history of substance abuse treatment, or that alcohol or drug use was a problem in their lives, were excluded from the study. As some students may indeed have a substance dependence diagnosis without self-reporting it, this could affect the validity of the undergraduates being a comparison population without substance dependence. This in turn, could affect the validity of the contention by the research hypotheses that wellness has a significant relationship to alexithymia, regardless of substance dependent status.

#### Discussion of the Findings and Current Research

The primary purpose of this study was to examine the relationship between alexithymia and total wellness in substance dependent and undergraduate groups. Application of emotional development constructs, such as alexithymia, is largely absent in the research literature of counseling and counselor education. Emotions and the concept of emotional development historically have been difficult areas of research, as the nature of emotion can be argued as existing as non-verbal phenomenon (Durand & Barlow, 1997).

Unlike behavior, which can be observed, and cognition, which can be expressed verbally, the essence of emotion seems to lie outside of linear phenomenology and in the realm of qualitative experience (Krystal, 1988). Due to complex nature of researching emotional development and its difficult clinical application, the majority of theoretical orientations in counseling emphasize cognitive or behavioral interventions over emotion-focused interventions (Greenberg, 2004).

Dysregulation of emotion has long been considered a symptom of many physical, psychiatric, and adjustment disorders (Freud, 1893/2000, Taylor et al., 1997). Yet, most theorists in counseling, psychology, and other helping professions have conceptualized emotional experience as secondary to instinctual drives (Taylor et al.), existential crisis (Frankl, 1967), attachment (Bowlby, 1969), and cognitive conflict (Ellis, 2001). Recently, emotion has been explored as perhaps existing as a parallel and separate developmental continuum from cognitive and behavioral development (Krystal, 1988, Greenberg, 2004).

#### *Discussion of Alexithymia and Current Research*

The alexithymia construct seems an important area of focus in emotional development research. The construct of alexithymia traces its origins from research into psychosomatic medicine (Taylor et al., 1997). Alexithymia refers to a personality trait in which an individual has difficulty processing emotions (Krystal, 1988). Alexithymic individuals are seen as having a reduced ability to apply emotional experience to issues of cognitive development, need for behavioral change, and successful relationships (Taylor et al.).

Another essential component of the alexithymic individual is an increased difficulty in distinguishing between the physiological aspects (the bodily sensations of emotional arousal) and the psychological dimensions of affect (Taylor et al., 1997). Because of this reliance on physical behaviors over emotional experience, alexithymic individuals are more prone to self-harmful behaviors such as substance abuse, eating disorders, and parasuicidal behavior to create emotional change (Krystal, 1988). Non-alexithymic individuals have been conceptualized as more prone to use emotional experience to increase personal change in cognitive issues, behavioral issues, and successful relationships (Krystal).

As mentioned in Chapter One and Chapter Two of this study, the alexithymia construct seems to be the best current measurement of emotional development and emotional dysregulation due to its validation as a construct in the literature and due to the reliability of its main assessment tool, the TAS-20 (Taylor et al., 1992). The results of this study indicated that alexithymia has a significant negative relationship to overall wellness in the participants of this study. As such, alexithymia seems an important area to consider in future emotional development research and research into the wellness orientation.

Research into the alexithymia construct with substance abuse populations has mainly been based in the medical model (Taylor et al., 1997). The medical model typically focuses on pathology-specific and substance-abuse specific treatment options (Galanter, 1991). Research into clinical application of emotion-focused constructs such as alexithymia is largely absent in the literature of the counseling profession and counselor education. In addition, research into the application of emotion-focused techniques is largely absent in the wellness orientation literature. Yet, emotional experience and emotional development have been viewed as important aspects of the wellness orientation (Myers et al., 2000).

#### *Discussion of Wellness and Current Research*

The wellness orientation has been viewed in the research literature as a defining component that distinguishes the counseling profession (Myers et al., 2000). In fact, the wellness orientation has been viewed by the American Counseling Association as a distinctive strength that distinguishes the profession of counseling from other helping professions (Seligman, 1996). However, few assessment tools have been developed to move the wellness orientation into applied clinical practice. The Wellness Evaluation of Lifestyle seems an important development for creating an assessment tool focused on using the wellness orientation in clinical settings. The

strength and the distinctiveness of the WEL and the wellness orientation derive from a focus of increasing overall wellness to treat counseling goals for clients (Myers et al., 2001). This wellness focus attempts to decrease the negative outcomes of traditional medical model treatment orientations by offering a strength-based and holistic understanding of client counseling needs (Myers et al., 2001).

Research into the occurrence of alexithymia among substance abuse populations suggests that many clients in substance dependence treatment also suffer from unusually high alexithymic states (Taylor et al., 1997). This study examined the idea that individuals suffering from alexithymia might also have reduced overall wellness. Total wellness scores were found to be significantly based on having alexithymia for the participants of this study.

Treatment that is substance abuse specific potentially may ignore the more pervasive alexithymic states of substance dependent populations, thereby decreasing client recovery from addiction (Taylor et al., 1997). According to Taylor et al., the alexithymia construct suggests that substance dependence is indicative of a more pervasive lack of healthy emotional regulation.

#### Implications for Counselors and Counselor Educators

Two major implications for counselors and counselor educators are considered from the results of this study. First, application of alexithymia to the wellness orientation will be related to the profession of counseling and counselor education. Second, two treatment orientations that emphasize emotional regulation as a key part of substance dependence treatment are considered. Both orientations, Dialectical Behavioral Therapy (Linehan, 1993) and Emotion Focused Therapy (Greenberg, 2004), are useful to counselors and counselor educators as they seem closely related to the findings of this study.



### *Alexithymia, Wellness, Counseling, and Counselor Education*

The primary outcome of this study was to examine the relationship of alexithymia to wellness in order to better understand the application of emotional development in the wellness orientation. The use of the wellness model has been championed as an essential component of the counseling profession and as being distinctive in what makes the counseling profession different from other helping professions (Remley & Herlihy, 2001). The wellness model attempts to reduce the negative outcomes of the pathology focus of the medical model by focusing on client strengths and increasing client holistic wellness (Ivey & Ivey, 1991).

The basis of clinical diagnosis and treatment planning in most mental health settings is the *DSM IV-TR*, rather than the wellness model (Ivey & Ivey, 1991). The literature suggests this is partly due to the counseling profession being a historically young field in comparison to social work, psychology, and psychiatry (Ivey & Ivey). Additionally, mental health care in the U.S. is based mainly on mental health care providers receiving payment for assessment and treatment emanating from the medical model (Hinkle, 1998).

The medical model is based on the pathology-focus of the *DSM IV-TR*, with a potential disregard for using other better-functioning aspects of human development to bring about client change (Ivey & Ivey, 1991). These authors have argued that although the *DSM IV-TR* offers behavioral diagnosis there is a pronounced absence of treatment intervention guidelines in the *DSM IV-TR* applicable to the diagnostic criteria. Due to this fact, mental health settings often seemed focused on patient diagnosis, rather than appropriate treatment interventions (Ivey & Ivey).

In contrast, the wellness model has been focused on the breadth of human development (cognitive development, behavioral development, spiritual development, multicultural

development) in order to increase empathy and understanding of client issues (Myers et al., 2000). One criticism of the use of the wellness orientation over other models is the lack of clinical assessment tools and applied clinical interventions based on the wellness model (Hinkle, 1998, Myers et al.).

Without assessment as applied to intentional treatment planning for needed areas of client growth, clinicians might promote the impression that counseling has no beginning, no measure of growth, and no clear resolution of client issues (Seligman, 1996). Clients and counselors might enter a counseling relationship in a wellness orientation without methods to assess specific areas for developmental change, create interventions for developmental change, and for the resolve developmental issues. A holistic understanding of wellness is definitely advantageous; yet without practical clinical application, wellness seems to promote abstraction rather than intentional client change in specific developmental areas of growth (Hinkle, 1998). If counselors use the wellness model, yet cannot provide a succinct, objective assessment of client needs, their sense of applicable interventions, and where clients are in the resolution of issues, then the counseling process may seem vague, abstract, and unfocused for both counselor and client.

Moreover, without a succinct assessment tool emanating from the wellness model, how can counselors provide initial assessment, offer treatment planning, and measure client growth and change without relying on the pathology-based assessment tool and treatment interventions based in the medical model? Some counselors contend that formal assessment and treatment planning are solely medical model concepts and take away from the holistic client focus of the wellness model (Ivey & Ivey, 1991). Yet, how can one measure client growth and objectively understand the most pervasive developmental needs for client change without assessment? Assessment in counseling need not provide a labeling effect, but rather can offer a method of

establishing areas for growth and measured success when based in the wellness model. Treatment planning need not focus solely on *DSM IV-TR* behavioral criteria to be effective; rather it can offer a map to improving areas for growth for clients. It seems that assessment and treatment planning are organizational methods that can be used in the wellness model of counseling.

The development of the WEL (Myers et al., 2001) offers a preliminary clinical assessment tool based on the wellness orientation. Use of the WEL provides specific assessment of areas of strength in client functioning and areas for client growth. A counselor using the WEL can be more intentional in assessing client strengths and areas for growth and develop succinct treatment planning with clients all based in the wellness model. Although there is very limited research in the use of the WEL clinically, its development seems an important milestone in the use of the wellness model in clinical applications.

Although the WEL measures numerous developmental areas, it seems to be limited in its assessment of emotional development and how emotional development is an important aspect of overall wellness. According to my review of the literature, there seem to be three major reasons for this. First, there is an absence of research on assessment of emotional development in counseling and counselor education. Second, the contention that emotional development might have a separate developmental continuum from cognitive and behavioral development is a relatively new concept currently being explored (Krystal, 1988). Third, emotions and emotional development seem a difficult area of research due to difficulty in defining what constitutes emotional experience and emotional development as opposed to other, more easily assessed areas such as cognitive, behavioral, and multicultural development (Ivey & Ivey, 2001).

In addition to the development of the WEL (Myers et al., 2001), the alexithymia construct seems an important development in understanding emotion and wellness. The alexithymia construct is a measure of emotional dysregulation as it applies to how an individual uses emotions to effectively negotiate cognitions, behavior, and relationships with others (Krystal, 1988, Taylor et al., 1997). As demonstrated by the findings in this study, alexithymia status has a significant relationship to overall wellness for both undergraduate participants and substance dependent participants.

According to the results of this study, alexithymia has a significant relationship to overall wellness. From a wellness orientation, the goal of substance abuse counseling should be to increase the many dimensions of overall wellness, potentially including the poor emotional coping skills associated with alexithymia. As discussed in Chapter Two, the benefit of using the wellness model would be to bely the negative outcomes of the pathology-focus of the medical model (Myers et al., 2000). The concept of alexithymia used in this study seems to point to a larger picture of substance abuse clients demonstrating a diminished sense of overall emotional development (Taylor et al., 1997).

The emotional dysregulation process of alexithymia has been purported in the literature as perhaps being more pervasive than substance dependence behavior (Krystal, 1988, Taylor et al., 1997). Currently, alexithymia seems the best measure of emotional development in the literature (Taylor et al.). According to the results of this study, alexithymia seems to have a significant relationship to overall wellness. Perhaps counselors working with clients suffering from substance dependency can use the alexithymia construct to base their interventions in the wellness model, instead of focusing solely on medical model interventions.

The use of the alexithymia construct in substance dependent settings may offer a more holistic and empathic understanding of the relationship among trauma, emotional dysregulation, and substance abuse behavior. Counselors focusing on improving the emotional development of alexithymic substance dependent clients, rather than focusing solely on substance abuse behavior, could potentially use the more empathic and empowering wellness model.

Hester (1994) suggested in his meta-analysis of more than 250 studies researching the effectiveness of various substance abuse treatments that empathy is an overwhelmingly “positive predictor for favorable outcomes” (p. 40). If Hester is correct, understanding the trauma-emotional dysregulation-alexithymia continuum of emotional development seems to of great practical clinical value in increasing counselor empathy for substance abuse client needs.

Finally, wellness, the WEL, alexithymia, and the TAS-20 offer practical instructional application to counselor education. Counselor education has often taught theoretical orientations emanating from other helping professions, such as clinical psychology (Adlerian, REBT, Gestalt, behavior modification). As such, its identity can seem based somewhat on clinical interventions of other professions such as psychology and social work. The wellness model and clinical application of the WEL to guide assessment and treatment planning seem a very important step in establishing a theoretical orientation and set of clinical interventions unique to the profession of counseling and counselor education.

As an instructional tool, counselor educators can use the WEL to help elaborate the many developmental dimensions of human functioning to counseling students in training. The use of the WEL in counselor education could provide a connection between the wellness model of counseling and treatment planning in clinical settings. Without assessment tools emanating from

a wellness perspective, beginning counselors may have an ethical dilemma of choosing to use medical model assessments that do not promote a holistic wellness perspective.

As mentioned, the WEL is an important step in establishing counseling as an effective profession, yet it does not offer a thorough assessment of emotional development. Counselor educators who use the alexithymia construct in instruction can offer a more effective and thorough understanding of the process of emotional development to students. The alexithymia construct offers a more succinct definition of what constitutes emotional dysregulation and seems an important beginning to understanding the connection between trauma and emotional development and wellness.

The TAS-20 (Taylor et al., 1997) currently seems the best measure of emotional development. Its use as an instructional tool seems an essential starting point to elucidating the lack of theoretical understanding of emotional development in counseling and counselor education. In addition, the results of this study provide additional support of the efficacy of using the TAS-20 in relation to the wellness model. Clinically, the TAS-20 can be used to assess clients who may need emotion-focused counseling interventions and broaden counselors' understanding of where clients function on an emotional development continuum. When used in tandem with the WEL, the TAS-20 can offer a very thorough assessment of wellness and development needs for a wide range of clients.

A secondary outcome of this study examined how the alexithymia construct could be used by clinicians working from a wellness orientation with clients in substance dependence settings. Two theoretical orientations applicable to increasing emotional development are Dialectical Behavioral Therapy (Linehan, 1993) and the Emotion Focused Therapy (Greenberg, 1993).

There are many theoretical orientations that use the emotional experience of clients to create client change in counseling. However, both DBT and the EFT seem best suited to the findings of this study. These orientations seem focused primarily on increasing emotional development to increase the overall functioning of clients. One treatment intervention plan would be to accurately assess for alexithymia and wellness, then create counseling interventions that use wellness strengths to increase emotional skill development for clients. Two orientations that focus on assessment and regulation emotion are Linehan's Dialectical Behavioral Therapy (1993) and Greenberg's Emotion focused therapy (1997). Both of these orientations offer explicit emotion-focused techniques that attempt to broaden emotional development and use emotional experience as a key part of client change in counseling.

As mentioned in Chapter One and Chapter Two of this study, the majority of treatment orientations for substance abuse counselors are based on the pathology focus of the medical model, not on a holistic understanding of substance abuse issues from the wellness perspective. In fact, there is an absence of research in understanding substance abuse from a wellness perspective. From the wellness model, one can use the alexithymia construct to view substance dependence as an ineffective lifestyle choice, decreasing overall wellness, and potentially based on suffering from the emotional dysregulation process of alexithymia.

#### *Emotion Focused Treatment Orientations*

A secondary purpose of this study was to examine how the alexithymia construct could be used by clinicians working from a wellness orientation in substance dependence settings. Emotion-focused orientations such as Linehan's Dialectical Behavior Therapy (Linehan, 1993) and Greenberg's Emotion Focused Therapy (Greenberg, 1996) seem to have practical applications to clients in substance dependent treatment. These two orientations can be

understood as distinctive from other orientations in that increasing emotional development seems a primary goal of counseling.

### *Dialectical Behavioral Therapy*

Linehan (1993) developed Dialectical Behavioral Therapy to increase the emotional skills as a way to reduce self-harmful behaviors such as parasuicidal and suicidal behaviors, substance abuse, and eating disorders. Linehan views the personality as fluid, unlike the stable developmental view of the personality in other medical model treatment orientations. In Linehan's view, disorders such as borderline personality disorder, major depressive disorder, bipolar disorder, and substance dependence contain behavioral tendencies that are rooted in poor emotional regulation skills. Linehan argues that personality can be conceptualized as a dialectical process between emotional skills, cognitions, and behaviors. Linehan suggests that clients with poor emotional development lack the emotional and cognitive skills to create effective behaviors. According to Linehan, to decrease self-harmful behaviors a client must learn more effective emotional skills and apply these skills to daily life.

Linehan (1993) views cognition as a fluid dialectical process. According to Linehan emotional skills and behavior are a negotiation between "emotional mind," "reasonable mind," and "wise mind," three concepts informed by Linehan's study of Zen Buddhism. Linehan suggests that a person uses emotional mind when thinking and behavior are controlled primarily by current emotional state. A person is in reasonable mind when knowledge is approached intellectually by attending to empirical facts, and approaching problems purposively and objectively. Linehan's dialectical contention suggests that both emotional mind and reasonable mind are essential ways of knowing. Linehan defines wise mind as an integration of emotional mind and reasonable mind so that an effective intuitive process develops from use of intellectual



analysis (reasonable mind) and sensual perceptions (emotional mind). According to Linehan, use of the wise mind to inform behavior is a powerful, intuitive dialectical process and is fundamental counseling goal.

Linehan (1993) established Dialectical Behavioral Therapy in order for clients to use wise mind to reduce the behavioral outcomes associated with boundary issues, addictive behaviors, and parasuicidal and suicidal behaviors. DBT is a complex treatment orientation involving six major treatment modalities: individual outpatient psychotherapy, skills training, supportive process group therapy, telephone consultation, case consultation for DBT therapists, and ancillary treatments.

In *individual outpatient psychotherapy*, counselors “are responsible for helping the patient inhibit maladaptive behaviors” (e.g., substance abuse, boundary issues, and self-harmful behaviors) “and replace them with adaptive skillful responses” such as the use of wise mind (Linehan, 1993, p. 102). *Skills training* refers to a structured set of skills that are taught in a psychoeducational format. The skills involve a variety of components that seem to relate closely to the wellness model, such as emotional development skills, stress management skills, health regulation, and relationship skills (Linehan).

Linehan (1993) also includes *supportive process group therapy* as essential component of DBT. Linehan states that group therapy is helpful to DBT clients in that it allows for clients to not feel marginalized and isolated and creates a practical environment where new skill content can be related to both other group members and to members’ daily lives.

In addition, *telephone consultation* is an important aspect of the DBT model. Although many therapist modalities dissuade clients from contacting a therapist outside of an individual or group session, Linehan (1993) argues that telephone consultation provides three positive

outcomes to DBT clients. First, crisis consultation allows an opportunity for clients to learn how to ask for help appropriately and effectively. Second, it provides an additional method for clients to learn how to generalize DBT skills to their daily lives. Third, it allows a way for clients a way to “repair their sense of an intimate therapeutic relationship” (p. 104).

Linehan (1993) states that *case consultation for DBT therapists* is an important aspect of DBT. Because DBT is complex and intensive in its treatment structure and because clients in a DBT setting might have gravely serious dysfunction, communication among the treatment team is a vital component. Linehan also suggests that *ancillary or additional treatment strategies* are sometimes necessary in the use of DBT. Some of the ancillary treatments she suggests are pharmacotherapy, acute hospitalization, vocational training, and residential day treatment.

Linehan’s DBT model is an intensive long-term treatment orientation. Treatment may last anywhere from months to over a year (Wetter, 2005). Wetter suggests that DBT has been used effectively with clients suffering from substance dependency, binge eating, suicidal and other self-injurious behaviors.

A study by Linehan, Armstrong, Suarez, Allmon, and Heard (1991) found that clients who participated in DBT treatment for 1 year were less likely to be self-injurious, be hospitalized, and more likely to stay in treatment when compared to a similar group of patients in other community treatments. Linehan, Comtois, Murray, Brown, Gallop, Heard, Korsland, Tutek, Reynolds, and Lindenboim (2006) found that women suffering from suicidal and other self-injurious behaviors, who underwent a 2 year DBT treatment had less suicide attempts and self-injurious behaviors, and fewer psychiatric hospitalizations when compared to a similar sample of women undergoing other community treatments. Other studies have found that when using DBT, clients have better scores on measurement of anger and better social adjustment than a similar

sample (Linehan, Tutek, Heard, & Armstrong, 1994). Linehan, Dimeed, Reynolds, Comtois, Shaw Welch, Heagerty, and Kivlahan (2002) found that substance dependent clients undergoing DBT treatment when compared to a similar sample had decreased treatment drop-out rates, decreased drug use, and higher levels of social and global adjustment.

A distinctive part of DBT is the emphasis on improving emotional regulation throughout the therapy structure and specific attention to learning more effective emotional skills. Linehan (1993) states that for many clients (e.g., borderline personality clients, substance dependence clients, clients suffering from eating disorders) painful feelings are often central and primary to changing problem behaviors. This notion seems related to this study's finding that alexithymia may have a negative relationship to overall wellness. Linehan seems to convey that for many clients improvement of emotional regulation is a key component of increasing overall wellness (Myers et al., 2000) by decreasing to alexithymia symptoms (Taylor et al., 1997).

Linehan (1993) provides several skills in DBT that are essential to increasing the emotional regulation of clients: *identifying and labeling affect, identifying obstacles to changing emotions, reducing vulnerability to emotional mind, increasing positive emotional events, increasing mindfulness to current emotion, taking opposite action, and applying distress tolerance techniques*. Again, these techniques seem to relate directly to improving the wellness of clients suffering from the symptoms of alexithymia in substance dependence settings.

*Identifying and labeling affect* seems to correspond to the alexithymia criteria of, "difficulty in identifying feelings and distinguishing between feelings" and "difficulty describing feelings to other people" (Taylor et al., 1997, p. 29). Potentially clients could work towards more effective identification and labeling of affect in substance dependent treatment to increase emotional

regulation and reduce symptoms of alexithymia. Linehan suggests this emotional regulation skill corresponds to many of the treatment modalities in DBT.

*Identifying obstacles to changing emotions* seems to relate to improving the alexithymia criteria of “constricted imaginal processes” and to “stimulus-bound, externally oriented cognitive style” (Taylor, et al., 1997, p. 29). Linehan suggests that once identification of affects are improved, then these affects can be related to cognitive, behavioral, and relationship obstacles to changing emotional regulation.

*Reducing vulnerability to emotional mind* seems to correlate to alexithymic clients having a harmful tendency to experience emotions as solely “bodily sensations of emotional arousal” (Taylor, et al., 1997, p. 29) in polarized states of either “good” or “bad” emotional experience (Krystal, 1988). Linehan (1993) states that clients using emotional mind as a primary coping behavior during negative emotional experience have a tendency toward emotional reactivity and to self-injurious behaviors (e.g., substance abuse, parasuicidal, and suicidal behaviors). Linehan suggests that reduction of vulnerability to emotional mind may include aspects of client nutrition, physical and environmental stress management, and improvement of self-efficacy skills. These counseling goals seem to correspond closely to the components of holistic wellness..

*Increasing positive emotional events* seems to relate closely to improving overall wellness for substance dependent clients. Linehan (1993) contends that substance dependent clients may assume they feel bad for good reasons. However, Linehan views negative emotions as often distorted by a tendency towards primary use of emotional mind, which may increase secondary negative cognitive interpretations of emotion. Rather than clients being passive to their emotions, Linehan suggests client in DBT can become positive change agents in increasing positive

emotional experience. This notion seems to be closely related to idea that increasing overall wellness is an active client choice (Myers et al., 2000).

*Increasing mindfulness to current emotion* seems to relate closely to increasing wellness across multiple contexts (Myers, et al., 2000) and to decreasing the alexithymia symptom of experiencing emotion in a “stimulus-bound, externally oriented cognitive style” (Taylor, et al., 1997, p. 29). Linehan (1993) argues that mindfulness to emotion means experiencing emotions without judging them or trying to inhibit them. She states that increasing mindfulness of experiencing painful emotions reduces the likelihood emotions can immediately create negative cognitive or behavioral consequences. If a client in emotional mind immediately experiences an emotion as “bad,” then more retractable secondary states of feeling such as guilt, anger, and anxiety may develop. Linehan states that techniques such as regular meditation practice, individual therapy, and group therapy can increase a DBT client’s mindfulness of emotion.

*Taking opposite action* seems to relate best to the “stimulus-bound externally oriented cognitive style” symptom and the “difficulty in distinguishing between feelings and bodily sensation” symptoms of alexithymia (Taylor et al., 1997. p. 29). Linehan (1993) suggests that taking opposite action is primarily a behavioral response to distressing emotions. Examples include a client doing something nice for someone inspiring their anger and changing facial and postural expressiveness to change negative physical sensations. Linehan argues that it is important that clients not mask painful emotions during this skill, but rather create a more effective, different emotion.

*Applying distress tolerance techniques* seems to correspond closely with the tendency for alexithymic clients to experience emotions as primarily bodily sensations (Taylor et al., 1997) and to increasing client’s emotional regulation across multiple wellness contexts (Myers et al.,

2000). Examples of distress tolerance techniques include acceptance of painful emotions, promoting behaviors to self-soothe the physiological aspects of painful emotions, stress management, meditation, and improving overall wellness through nutrition and exercise (Linehan).

Linehan's (1993) promotion of increasing wise mind in DBT to establish more effective emotional regulation seems to integrate easily into the wellness mode and to the concept of substance dependent clients suffering from the potentially more pervasive alexithymia construct. Also, Linehan's focus on clients relating emotional experience to multiple contexts seems closely related to the wellness model (Myers et al., 2000). Linehan's emphasis on learning successful emotional skills seems to relate powerfully to this study's exploration of the relationship between alexithymia, emotional development, and overall wellness for clients in substance dependent treatment.

#### *Emotion Focused Therapy*

Greenberg (2004) established Emotion Focused Therapy as an alternative to what he viewed as a preponderance of cognitive-focused and behavioral-focused therapies that ignore the importance of emotional change in therapy. Greenberg views many presenting problems of clients (e.g., mood disorders, self-injurious behaviors, substance dependence) as more accurately based in emotional experience than in cognitive and behavioral experience. Greenberg's EFT approaches treatment through improving client emotional development, improving emotional regulation, and fundamentally focusing on emotional change to improve client functioning. Greenberg's EFT seems to relate easily to the findings of this study; that emotional dysregulation, such as alexithymia status, perhaps has a negative relationship to overall wellness.

Greenberg (2004) has conceptualized Emotion Focused Therapy as consisting of two phases: *emotion coaching* and *emotion transformation*. Emotional coaching refers to both *awareness* and the *acceptance* of emotion (Greenberg). Greenberg contends that clients often have maladaptive beliefs about emotional experience that are important to remediate to bring out client change for presenting problems such as substance dependence. These maladaptive beliefs can further emotional dysregulation and seem closely related to promoting the constructs of alexithymia and wellness. In EFT, Greenberg states that counselors remediate poor emotional regulation by helping clients view emotional awareness as important for growth, helping clients learn to welcome emotional experience, helping clients learn to describe their emotions to themselves and others in order to solve problems, and helping clients to focus on primary emotions, not secondary feeling states.

*Emotional transformation* refers to actively changing emotional dysregulation through four core components (Greenberg, 2004). First, clients are taught to evaluate if behavioral or cognitive responses to emotional experience are healthy or unhealthy responses. Second, unhealthy responses to emotional experience are evaluated for their relationship to learned dysfunctional emotional patterns. Third, clients are helped to find an alternate, more effective emotional response to negative emotional experience. Fourth, clients are coached to challenge “their destructive thoughts, in their unhealthy emotions, from a new inner voice based on their health primary emotions and needs, and to learn to regulate when necessary” (Greenberg, 2004, pg. 7).

Two core components are fluid throughout the emotion awareness and emotion transformation of EFT. First, dysfunctional behaviors and cognitions are seen as best understood as based on more pervasive dysfunctional emotional regulation. Second, Greenberg (2004)

makes an important distinction between *primary emotions* and *secondary emotions*. Primary emotions are defined by Greenberg (2004) as a client's initial emotional experience. Secondary emotions are defined as potential defenses to primary emotions usually based in prior thoughts, feelings, and behaviors. Greenberg contends that secondary emotional experience is often core to emotional dysregulation. Clients must be able to access and evaluate primary emotions in order to regulate secondary emotional experience and bring about emotional change for presenting problems.

Dialectical Behavior Therapy (Linehan, 1993) and Emotion Focused Therapy (Greenberg, 2004) are treatment orientations for substance dependence that seem related closely to the findings of this study. Both orientations potentially view substance dependence as based in a more pervasive process of emotional dysregulation that is an essential assertion of the alexithymia construct. Additionally, both orientations seem to place emphasis on understanding client dysfunction in multiple contexts, similar to the wellness orientation.

#### Implications for Future Research

Both the WEL and the alexithymia construct are relatively new developments. As such, both wellness and alexithymia are rich in implications for future research. To what degree counselors use a wellness orientation in counseling settings seems an important area of research. The majority of clinical orientations taught to beginning counselors emanate from other disciplines with few assessment tools based in the wellness orientation. In addition, most clinical settings use medical model interventions due to the history of the helping professions and because payment for mental health services typically is based on medical model service delivery models (Hinkle, 1998). Researching how counselors integrate a wellness orientation into such settings seems an important area of research.



As mentioned earlier, there is little research in the use of the WEL as a clinical assessment tool. A starting point for research into the WEL could focus on both current counseling practice and the development of counselor education programs. A starting point for research into the effectiveness of using the WEL clinically could be its use for increasing counselor understanding of client presenting problems, treatment planning, and resolving client issues, using both qualitative and quantitative research methods. These results could be compared to counselors who do not use the WEL in assessment and treatment planning.

In addition, a comparison study could be created using client satisfaction with the counseling experience using the WEL versus client satisfaction with counseling relationships that do not use the WEL. Counselor educators could use the WEL to form research questions regarding counseling students, supervision style, supervision effectiveness, and effectiveness of counseling student interventions in practicum and internship settings.

The relationship between alexithymia and wellness seems an important topic to research further. Additional research in establishing emotional development as a distinctive developmental dimension to human functioning could be an important area of research increasing theoretical understanding and clinical effectiveness. Researching the effectiveness of emotional development interventions based on theoretical orientations such as Dialectical Behavior Therapy (Linehan, 1993), Developmental Counseling Theory (Ivey & Ivey, 1991), and Emotion Focus Therapy (Greenberg, 1996) in experimental studies would be a practical area of research.

Research on substance dependence has found a significantly larger occurrence of alexithymia, 60%, than in normal populations, 10%, according to Taylor et al. (1997). Two major research areas are suggested by this study's examination into the relationship between

alexithymia, wellness, and substance dependence. First, to what degree do counselors in substance abuse settings find that the wellness orientation is a practical orientation treating addiction? Do substance abuse counselors use the wellness orientation? Do substance abuse counselors and clients find the wellness orientation important to reducing addiction behavior?

Second, do substance abuse clients find that the alexithymia construct is an accurate depiction of their emotional dysregulation development, leading to continued states of addiction? Do counselors find that addiction is best understood as having a more pervasive developmental dimension, such as the alexithymia construct? Does a focus on increasing emotional development in treatment reduce substance abuse relapse rates?

Finally, the results of this study are perhaps most compelling for substance abuse clinicians in relation to Hester's (1994) meta-analysis of more than 200 different approaches to treating alcoholism that have appeared in the literature. Hester found that the overwhelmingly important factor in successful sobriety was the client's experience of empathy in the counseling relationship. Alexithymia as a construct of emotional dysregulation seems to create a much more compassionate and potentially empathic understanding of the relationship between emotional trauma, alexithymic status, and substance abuse behavior than traditional substance-specific treatment orientations. If clinicians can use the alexithymia construct to see substance abuse as a poor lifestyle choice reducing overall wellness, then perhaps they can focus on improving emotional development skills, rather than promoting shame, doubt, and the labeling outcomes of the medical model.

### Conclusions

The relationship between alexithymia, wellness, and substance dependence examined in this study has important implications for counselors and counselor educators, and for future research.

The primary purpose of this study was to use the construct of alexithymia in order to make inference about wellness. This study found that alexithymia had a significant relationship to wellness for both substance dependent clients and undergraduates. In light of these results, future research into the constructs and relationships between alexithymia, emotional development, wellness, and the WEL (Myers et al., 2001) seem a practical and important focus of research.

Additionally, both the WEL and the TAS-20 seem to be useful instruments for counselors assessing the emotional development needs of clients in counseling settings. Two treatment orientations for substance dependence, DBT (Linehan, 1993) and EFT (Greenberg, 2004), seem to possibly promote the findings of this study. Both orientations should be further explored for counselors interested in the constructs of emotional regulation, alexithymia, and wellness. The findings of this study and their application to counseling and counselor education hopefully are an important beginning step in establishing a presence for research into emotions and wellness in counseling and counselor education.

## REFERENCES

- American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders (4<sup>th</sup> ed.)*. American Psychiatric Association: Washington, D.C.
- American Psychiatric Association (2000). *Diagnostic and Statistical Manual of Mental Disorders-Text Revision*. American Psychiatric Association: Washington, D.C.
- Applebaum, S. A. (1973). Psychological-mindedness: Word, concept, and essence. *International Journal of Psychoanalysis*, 54, 35-45.
- Ardell, D. B. (1988). *Planning for wellness: A commitment to personal excellence (3<sup>rd</sup> ed.)*. Kendall/Hunt: Dubuque, Iowa.
- Bagby, R. M., Parker, J. D. A., Taylor, G. J., & Acklin, M. W. (1993, March). *Alexithymia and the ability to distinguish different emotional states*. Poster session at the meeting of the American Psychosomatic Society, Charleston, SC.
- Barchas, J. D., Elliot, G. R., Berger, P. A., Barchas, P. R., & Solomon, F. (1985). Research on mental illness and addictive disorders: progress and prospects. *American Journal of Psychiatry*, 142, 9-41.
- Bell, C. M., & Khantzian, C. J. (1991). Contemporary psychodynamic perspectives and the disease concept of addiction: Complementary or competing models? *Psychiatric Annals*, 21, 273-281.
- Booth-Butterfield, M. & Booth-Butterfield, S. (1990), Conceptualizing affect as information in communication production. *Human Communication Research*, 16, 451-476.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. Basic Books: New York.

- Brooks, C. W. (2000). The relationship among substance abuse counselor's spiritual well-being, values, and wellness. *Journal of Addictions and Offender Counseling*, 21, 23-34.
- Cannon, W. B. (1929). *Bodily changes in pain, hunger, fear, and rage* (2<sup>nd</sup> ed.). New York: Appleton-Century-Crofts.
- Cochrane, C. E., Brewerton, T. D., Wilson, D. B., & Hodges, E. L. (1993). Alexithymia in eating disorders. *International Journal of Eating Disorders*, 14, 219-222.
- Cohen, J. (1998). *Statistical power analysis for the behavioral sciences* (2<sup>nd</sup> ed.). New York: Academic Press.
- Connolly, K. M. (2000). The relationship among wellness, mattering, and job satisfaction (Doctoral dissertation, The University of North Carolina at Greensboro, 2000). *Dissertation Abstracts International*, 61, 5.
- Costa, P. T. & McCrae, R. R. (1985). *The NEO Personality Inventory manual*. Psychological Assessment Resources: Odessa, FL.
- Crain, W. (1992). *Theories of development: Concepts and applications*. Prentice Hall: New York.
- Dillon, F., Turner, C., Robbins, M., & Szapocznik (2005). Concordance among biological, interview, and self-report measures of drug use among African-American and Hispanic adolescents referred for drug abuse treatment. *Psychology of Addictive Behavior* 19, 404-413.
- Darwin, C. (1872/1965). *The expression of emotion in men and animals*. Chicago, IL: University of Chicago Press.

- Dew, B. J. (2000). The relationship among internalized homophobia, self-disclosure, self-disclosure to parents and wellness in adult gay males (Doctoral dissertation, The University of North Carolina at Greensboro, 2000). *Dissertation Abstracts International*, 61, 1750).
- Durand, V. M., & Barlow, D. H. (1997). *Abnormal psychology: An introduction*. Brooks/Cole: Pacific Grove, CA.
- Ellis, A. E. (2001) *Rational emotive behavior therapy: Overcoming destructive beliefs, feelings, and behaviors*. Prometheus: New York.
- Eysenck, H. J. & Eysenck, M. W. (1985). *Personality and individual differences: A natural science approach*. Plenum Press: New York.
- Frankl, V. E. (1967). *Psychotherapy and Existentialism*. Washington Square Press: New York.
- Freud, S. (1893/2000). *Studies on hysteria*. Basic Books: New York.
- Frijda, N.H. (1986). *The emotions*. Cambridge, UK: Cambridge University Press.
- Frosch, A. (1995). The preconceptual organization of emotion. *Journal of the American Psychoanalytic Association*, 43, 423-447.
- Galanter, M. (1991), *Clinical textbook of addictive disorders*. Guilford: New York.
- Goleman, D. (1995). *Emotional Intelligence*. Bantam: New York.
- Granello, P. F. (1995). Wellness as a function of perceived social support network and ability to empathize (Doctoral dissertation, The University of North Carolina at Greensboro, 1986), *Dissertation Abstracts International*, 57, 1996.
- Greenberg, L. (2004). Emotion-focused therapy. *Clinical Psychology and Psychotherapy*, 11, 3-16.

- Greenberg, L. (1996). *Facilitating emotional change: The moment-by-moment process*. Guilford Press: New York.
- Group for the Advancement of Psychiatry Committee on Alcoholism and the Addictions (1991). Substance use disorders: A psychiatric priority. *American Journal of Psychiatry*, 148, 1291-1300.
- Hammer, A. (1988). *The Coping Resources Inventory*. Palo Alto, CA: Consulting Psychologist Press.
- Haviland, M. G. (1988). Validation of the Toronto Alexithymia Scale with substance abusers. *Psychotherapy and Psychosomatics*, 50, 81-87.
- Haviland, M. G., Hendryx, M. S., Shaw, D. G. & Cummings, M. A. (1988). Validation of the Toronto Alexithymia Scale with substance abusers. *Psychotherapy and Psychosomatics*, 50, 81-87.
- Haviland, M. G., Hendryx, M. S., Shaw, D. G. & Henry, J. P. (1994). Alexithymia in women and men hospitalized for psychoactive substance dependence. *Comprehensive Psychiatry*, 35, 124-128.
- Haviland, M. G., Hendryx, M. S., Shaw, D. G. & MacMurray, J. P. (1991). Multidimensionality and state dependency of alexithymia in recently sober alcoholics. *Journal of Nervous and Mental Disease*, 179, 284-290.
- Hermon, D. A. (1995). An examination of the relationship between college students' subjective well-being and adherence to a holistic wellness model (Doctoral dissertation, Ohio University, 1995). *Dissertation Abstracts International*, 57, 587.

- Hester, R. K. (1994). Outcome research: Alcoholism. In M. Galanter & H. D. Kleber (Eds.), *The American Psychiatric Press textbook of substance abuse treatment* (p. 35-43). Washington, DC: American Psychiatric Press.
- Hettler, B. (1983). *Testwell*. Steven's Point, WI: National Wellness Institute.
- Hinkle, J. S. (1998). A voice from the trenches: A reaction to Ivey and Ivey. *Journal of Counseling and Development*, 77, 474-483.
- Hofford, C. W. & Spelman, K. A. (1996). The community action plan: Incorporating health promotion and wellness into alcohol, tobacco, and other drug abuse prevention efforts on the college campus. *Journal of Wellness Perspectives*, 12, 70-80.
- Howell, D. C. (1997). *Statistical methods for psychology* (4<sup>th</sup> ed.). New York: Duxbury Press.
- Humphreys, K. (2000). Professional interventions that facilitate 12-step self-help group involvement. *Alcohol Research and Health*, 23, 93-98.
- Ivey, A. E., & Ivey, M. B. (1991). *Developmental strategies for helpers: Individual, family, and network interventions*. Pacific Grove, CA: Brooks/Cole.
- James, W. (1890/1950). *Principles of psychology (Vol. 1)*. New York: Dover Publications.
- Kauhanen, J., Julkunen, J., & Salonen, J. T. (1992). Validity and reliability of the Toronto Alexithymia Scale (TAS) in a population study. *Journal of Psychosomatic Research*, 36, 687-694.
- Keller, D. S., Carroll, K. M., Nich, C., Rounsaville, B. J. (1995). Alexithymia in cocaine abusers: Response to psychotherapy and pharmacotherapy, *American Journal on Addictions*, 4, 234-244.
- Khazantian, E. J. (1985). The self-medication hypothesis of addictive disorders: Focus on heroin and cocaine dependence. *American Journal of Psychiatry*, 142, 1249-1264.



- Kirmayer, L. J. (1987). Languages of suffering and healing: Alexithymia as a cultural and social process. *Transcultural Psychiatric Research Review*, 24, 119-136.
- Koerner, K., Kohlenberg, R., & Parker, C. (1996). Diagnosis of personality disorder: A radical behavioral alternative. *Journal of Consulting and Clinical Psychology*, 64, 169-1176.
- Kondas, O. & Kordacova, J. (1990). Prehledove studie: Alexitymia a jej metodicke zachytenie. *Ceskoslovenska Psychologie*, 34, 411-425.
- Krystal, H. (1988). *Integration and self-healing: Affect, trauma, alexithymia*. Analytic Press: Hillsdale, NJ.
- Lane, R. D., & Schwartz, G. E. (1987). Levels of emotional awareness: A cognitive-developmental theory and its application to psychopathology. *American Journal of Psychiatry*. 144, 133-143.
- Lange, C.G. (1885). *On emotions: a psycho-physiological study*. Baltimore, MD: Williams and Wilkins.
- Lazarus, R. J. (1999). *Stress and emotion*. Springer Publishing: New York.
- Levin, J. D., Culkin, J., & Perrotto, R. S. (2001). *Introduction to Chemical Dependency Counseling*. Aronson: Northvale, NJ.
- Linehan, M., Comtois, K., Murray, A., Brown, M., Gallop, R., Heard, H., Korsland, K., Tutek, D., Reynolds, S., & Lindenboim, N. (2006). Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs therapy by experts for suicidal behaviors and borderline personality disorder. *Archives of General Psychiatry*, 63, 757-766.

- Linehan, M., Dimeff, L., Reynolds, S. Comtois, K., Shaw Welch, S., Heagerty, P. & Kivlanhan, D., (2002). Dialectical behavior therapy versus comprehensive validation plus 12-step for the treatment of opioid dependent dependent women meeting criteria for borderline personality disorder. *Drug and Alcohol Dependence*, 67, 13-26.
- Linehan, M. Tutek, D., Heard, H., & Armstrong, H. (1994). Interpersonal outcome of cognitive behavioral treatment for chronically suicidal borderline patients. *American Journal of Psychiatry*, 151, 1771-1776.
- Linehan, M. (1993). *Cognitive behavioral treatment of borderline personality disorder*. Guilford: NY.
- Linehan, M., Armstrong, H., Suarez, A., Allmon, D., & Heard, H. (1991). Cognitive-behavioral treatment of chronically parasuicidal borderline patients. *Archives of General Psychiatry*, 48, 1060-1064.
- Libbrecht, K. (1997). Mental health or mental healing? *Society*, 35, 20-23.
- Lodhi, P. H., & Thakur, S. (1993). Personality of drug addicts: Eysenckian analysis. *Personality and Individual Differences*, 15, 121-128.
- Loiselle, C. G., & Dawson, C. (1988). Toronto Alexithymia Scale: Relationships with measures of patient self-disclosure and private self-consciousness. *Psychotherapy and Psychosomatics*, 50, 109-116.
- Magai, C., & McFadden, S. H. (1995). *The role of emotions in social and personality development*. New York: Plenum Press.
- Makinson, L. S. (2001) The relationship of moral identity, social interest, gender, and wellness among adolescents (Doctoral dissertation, The University of North Carolina at Greensboro, 2001). *Dissertation Abstracts International*, 62, 2037.

- McAuliffe, G. J., & Ericksen, K. P. (1999). Toward a constructivist and developmental identity for the counseling profession: The context-phase-stage-style model. *Journal of Counseling and Development, 77*, 267-280.
- McDonald, P. W., & Prkachin, K. M. (1990). The expression and perception of facial emotion in alexithymia: A pilot study. *Psychosomatic Medicine, 52*, 199-210.
- McKenzie, K. (1999). Moving the mis-diagnosis debate forward. *International Review of Psychiatry, 11*, 153-161.
- McMillan, J. H. & Schumacher, S. (1997). *Research in education: A conceptual Introduction* (4<sup>th</sup> ed.). Addison Wesley: New York.
- Messick, S. (1989). *Educational measurement*. (3<sup>rd</sup> ed.). American Council on Education and the National Council on Measurement in Education: Washington, DC.
- Miyaoka, H. (1992). Clinical significance of alexithymia. *Japanese Journal of Psychosomatic Medicine, 32*, 24.
- Myers, J. E., Sweeney, T. J., Witmer, J. M. (2001). *The wellness evaluation of lifestyle: An instrument for assessing and planning wellness lifestyles*. Redwood City, CA: Mind Garden.
- Myers, J. E., Sweeney, T. J., Witmer, J. M. (2000). The wheel of wellness counseling for wellness: A holistic model for treatment planning. *Journal of Counseling and Development, 78* (3), p. 251-267.
- National Wellness Institute, *Definition of wellness*, (nd.) accessed November 7, 2003, from [www.nationalwellness.org/home/definitionofwellness.asp](http://www.nationalwellness.org/home/definitionofwellness.asp)
- Nejedlo, R. J. Hansen, L. S., & Myers, J. E. (1994). A strategic plan for AACD's future: The precursors of ACA. *Journal of Counseling and Development, 72*, 276-286.

- Norusis, M. J. (2006) *SPSS 14.0 Guide to Data Analysis*. New York: Prentice Hall.
- Palant, J. (2005) *SPSS Survival Manual: A step by step guide to data analysis using SPSS for Windows (version 12)* (2<sup>nd</sup> ed.). Berkshire, UK: Open University Press.
- Parker, J. D. A., Bagby, R. M., Taylor, G. J. (1989). The alexithymia construct: Relationship with sociodemographic variables and intelligence. *Comprehensive Psychiatry*, 30, 434-441.
- Parker, J. D. A., Bagby, R. M., Taylor, G. J., Endler, N. S., & Schmitz, P. (1993). Factorial validity of the 20-item Toronto Alexithymia Scale. *European Journal of Personality*, 7, 221-232.
- Piaget, J. (1967). *Six psychological studies*. New York: Random House.
- Pinard, L., Negrete, J. C., Annable, L., & Audet, N. (1996). Alexithymia in substance abusers: Persistence and correlates of variance. *American Journal on Addictions*, 5, 32-39.
- Plutchik, R. (1993). Emotions and their vicissitudes: emotions and psychopathology. In M. Lewis & J. Haviland (Eds.), *Emotion: Theory, research, and experience, vol. 1. Theories of emotion*, pp. 3-33. New York: Academic Press.
- Prince, R. (1987). Alexithymia and verbal psychotherapies in cultural context. *Transcultural Psychiatric Research Review*, 24, 107-118.
- Pryczak, F., & Bruce, R. (1988). *Writing empirical research reports: A basic guide for students of the social and behavioral sciences* (2<sup>nd</sup> ed.). Los Angeles: Pryczak Publishing.
- Remley, T. P. & Herlihy, B. (2001). *Ethical, legal, and professional issues in counseling*. Upper Saddle River, NJ: Prentice Hall.
- Rikli, R.E., & Jones, C.J. (1999). Definition of health promotion: Part III: Expanding the Definition, *American Journal of Health Promotion*, 3, 5-12.
- Rodrigo, G. & Luisardo, M. (1992). Factor structure of the Spanish version of the Toronto

- Alexithymia Scale. *Psychotherapy and Psychosomatics*, 58, 197-201.
- Rybakowski, J., & Ziolkowski, M. (1990). Clinical and biochemical heterogeneity of alcoholism: The role of family history and alexithymia. *Drug and Alcohol Dependence*, 27, 73-77.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, cognition, and personality*, 9, 185-211.
- Santrock, J. W. (1996). *Adolescence: An introduction*. Brown & Benchmark: Madison, WI.
- Sifneos, P. E. (1973). The prevalence of 'alexithymic' characteristics in psychosomatic patients. *Psychotherapy and Psychosomatics*, 22, 255-262.
- Schmidt, U., Jiwany, A., & Treasure, J. (1993). A controlled study of alexithymia in eating disorders, *Comprehensive Psychiatry*. 34. 54-58.
- Seligman, L. (1996). *Diagnosis and treatment planning in counseling* (2<sup>nd</sup> ed.). New York: Plenum Press.
- Shaver, P. A., & Brennan, K. A. (1992). Attachment styles and the 'big five' personality traits: Their connections with each other and with romantic relationship outcomes. *Personality and Social Psychology Bulletin*, 18, 536-545.
- Sifneos, P. E. (1988). Alexithymia and its relationship to hemispheric specialization, affect and creativity. *Psychiatric Clinics of North America*, II, 287-292.
- Sifneos, P. E. (1973). The prevalence of "alexithymic" characteristics in psychosomatic patients. *Psychotherapy and Psychosomatics*, 22, 255-262.
- Smart, D. W., & Smart, J. F. (1997). DSM-IV and culturally sensitive diagnosis: Some observations for counselors. *Journal of Counseling and Development*, 75, 392-398.

- Smith, H. B. & Robinson, G. P. (1995). Mental health counseling: Past, present, and future. *Journal of Counseling and Development, 74*, 158-168.
- Sriram, T. G., Chatuvedi, S. K., Gopinath, P. S., & Subbakrishana, D. K. (1987). Assessment of alexithymia: Psychometric properties of the Toronto Alexithymia Scale (TAS)—a preliminary report. *Indian Journal of Psychiatry, 29*, 133-138.
- Stern, D. N. (1985). *The interpersonal world of the infant*. New York: Basic Books.
- Stinchfield, R., & Owen, P. (1998). Hazelden's model of treatment and its outcome. *Addictive Behaviors, 23*, 669-683.
- Substance Abuse & Mental Health Services Administration (SAMHSA) (2005). *Results from the 2005 National Survey on Drug Use and Health: National Findings*. Retrieved December 12, 2006, from <http://www.oas.samhsa.gov/NSDUH/2k5NSDUH/2k5results.htm>
- Taylor, G. J., Bagby, R. M., & Parker, J. D. A. (1997) *Disorders of affect regulation: Alexithymia in medical and psychiatric illness*. Cambridge University: Cambridge, UK.
- Taylor, G. J., Bagby, R. M., & Parker, J. D. A. (1992). The revised Toronto Alexithymia Scale: Some reliability, validity, and normative data. *Psychotherapy and Psychosomatics, 57*, 34-41.
- Taylor, G. J., Parker, J. D. A., & Bagby, R. M. (1990). A preliminary investigation of alexithymia in men with psychoactive substance dependence. *American Journal of Psychiatry, 147*, 128-1230.
- Tomkins, S. S. (1984). Affect theory. In K. R., Scherer & P. Ekman (Eds.). *Approaches to emotion*, (pp. 163-195). Hillsdale, NJ: Erlbaum.
- Tomkins, S. S. (1963). *Affect, imagery, consciousness. Vol. 2: The negative affects*. Springer,

NY.

Tomkins, S. S. (1962). *Affect, imagery, consciousness. Vol. 1: The positive affects*. Springer,

NY.

Totton, N. (1999). The baby and the bathwater: "Professionalisation" in psychotherapy and counselling. *British Journal of Guidance and Counseling*, 27, 313-324.

United States Census Bureau (2000) *Ranking Tables for States: Population in 2000 and Population Change from 1990 to 2000*. Retrieved September 6, 2006, from <http://www.census.gov/population/www/cen2000/tablist.html>

Vecchione, T. P. (1999). An examination of the relationship between career development and holistic wellness among college students (Doctoral dissertation, Ohio University, 1999). *Dissertation Abstract International*, 60, 2390.

Weiss, R., Najavits, L., Greenfield, S., Soto, J. Shaw, S., Wyner, D. (1998). Validity of substance use self-reports in dually diagnosed outpatients. *American Journal of Psychiatry*. 155, 127-128.

Wetter, M. (2005). *Dialectical Behavior Therapy*. Eau Claire, WI: PESI Healthcare, Inc.

World Health Organization. *Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946*; Official Records of the World Health Organization, no. 2, p. 100.

Ziolkowski, M., Gruss, T. & Rybakowski, J. K. (1995). Does alexithymia in male alcoholics constitute a negative factor for maintaining abstinence? *Psychotherapy and Psychosomatics*, 63, 169-173.

Zucker, R. A. (1987). *The four alcoholisms: A developmental account of etiologic process*. University of Nebraska: Lincoln, NE.

## VITA

Benjamin J. Warner was raised in Magnolia, Arkansas. In 1996 he graduated from the University of Arkansas with a double major in Anthropology and Sociology. He completed a Master's of Education Degree in Counseling in 2000 at Southern Arkansas University and completed a Doctor of Philosophy degree in Counselor Education from the University of New Orleans in May 2007.

Ben is a Licensed Professional Counselor in Louisiana and Texas. He is also a Nationally Certified Counselor. He has had experience counseling a wide range of clients including children, adolescents, adults, and families. He has worked as a counselor in schools settings, substance abuse treatment settings, in community mental health settings, and in forensic settings. Ben has presented at local, state, national, and international conferences.

Currently, Ben provides counseling services in private practice in Austin, Texas, and is a forensic mental health consultant with the Travis County Courts and the Austin-Travis County Mental Health and Mental Retardation Center.