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University of Alberta

Codependency and Psychopathology

by

Michelle Jean Worth



A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of **Doctor of Philosophy**

in

Counselling Psychology

Department of Educational Psychology

Edmonton, Alberta

Spring 1996



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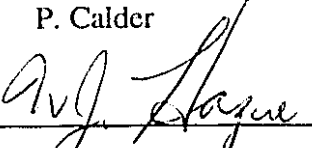
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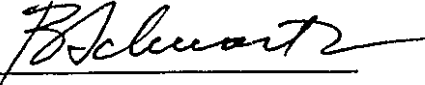
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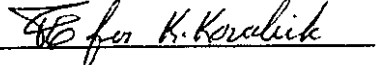
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To Chris Andrew

ABSTRACT

The relationship between codependency, as measured by the Individual Outlook Test (IOT), and psychopathology, as measured by the Basic Personality Inventory (BPI) and the Symptoms Checklist 90-R (SCL 90-R), was examined. Specifically, Pearson Product Moment correlations on a sample of $N = 103$ adult respondents (50 females and 53 males) from Edmonton, St. Paul and Whitecourt, Alberta, Saskatoon, Saskatchewan, St. Boniface, Manitoba and Prince George, British Columbia revealed that codependency is positively and significantly related to depression, anxiety, compulsive behaviors and self-depreciation.

Stepwise multiple regression analysis of the BPI scales and SCL 90-R primary symptom dimensions and indices of distress as predictors of codependency was performed ($N = 103$). The analysis reveals that the BPI scales of Persecutory Ideas, Anxiety, Depression and Impulse Expression and that the SCL 90-R symptom dimensions of Interpersonal Sensitivity, Depression and Obsessive Compulsive best predict codependency. In addition, the indices of distress on the SCL 90-R that best predict codependency are the Positive Symptom Total and the Positive Symptom Distress Index.

Independent t-tests were used to compare the mean scores on the BPI scales and the SCL 90-R symptom dimensions and indices of distress for a codependent group ($n = 19$) and a noncodependent group ($n = 17$) extracted from the total sample for this study ($N = 103$). The analysis revealed that codependency is associated with increased levels of psychopathology. However, while increased psychopathological symptomatology was associated with codependency, codependency was not necessarily associated with clinical diagnosis using DSM nomenclature.

Two selected validation procedures of the iOT were also conducted. Pearson Product Moment correlations ($N = 103$) indicate positive and significant correlations between codependency and 11 of the 12 BPI scales and all components of the SCL 90-R and a negative relationship with the BPI Denial scale. It is noted that the magnitude of the correlations, the highest of which is .68, provides some support for the divergent validity of the IOT.

ACKNOWLEDGMENTS

The author wishes to acknowledge her indebtedness to a number of individuals. To Dr. Eugene E. Fox for his unfailing support and gentle guidance. To Sr. Eveline Gagnon for her prayerful presence throughout my journey and to the Grey Nuns of the St. Albert Province who made my graduate studies possible. To Odile Mahe for her phenomenal ability to find participants for this study. To Doris Rank for the gift of her friendship and her patience with the paper blizzard generated during the writing of this dissertation. To Susan Worth for her courage in tackling the monumental task of data entry. To Joyce Ndalichako for her statistical expertise. To my parents, Walter and Joan Worth, for their belief in me and their unwavering love.

And finally to Barbara Paulson and Chris Andrew without whom this dream would never have been a reality.

TABLE OF CONTENTS

CHAPTER I	1
Introduction	1
Defining and Measuring Codependency	1
Perspective of the Problem	1
Existing Measures of Codependency	3
Friel Co-dependency Assessment Inventory (CAI)	3
The Codependency Assessment Questionnaire (CAQ)	3
Spann Fischer Codependency Scale (CDS)	4
The Individual Outlook Test (IOT)	4
The Relationship between Codependency and Psychopathology	5
Conclusion	5
CHAPTER II Literature Review	7
Introduction	7
Codependency and Psychopathology	7
Codependency as a Personality Disorder	8
The Relationship between Codependency and Psychopathology	11
Diagnosing and Measuring Codependency	11
Existing Attempts to Develop Instruments to Measure Codependency	12
Friel Co-dependency Assessment Inventory (CAI)	13
The Codependency Assessment Questionnaire (CAQ)	15
Spann-Fischer Codependency Scale (CDS)	16
The Individual Outlook Test (IOT)	18
Conclusion	23
Research Hypotheses	24
CHAPTER III Methods and Procedures	25
Introduction	25
Sampling Method and Procedure	25
Data Collection Method and Procedure	26
Instrumentation	27
The Individual Outlook Test (IOT)	27
Validity of the IOT	28
Reliability of the IOT	29
Scoring of the IOT	29
The Basic Personality Inventory (BPI)	29
Validity of the BPI	30
Reliability of the BPI	31
Scoring the BPI	31
The Symptom Checklist 90-R (SCL 90-R)	31
Validity of the SCL 90-R	32
Reliability of the SCL 90-R	32
Scoring the SCL 90-R	32

TABLE OF CONTENTS (continued)

Administration Time and Conditions.....	33
Statistical Method and Procedure.....	33
Limitations	34
CHAPTER IV Findings and Conclusions.....	35
Introduction	35
Hypothesis 1.....	35
Statistical Analysis	35
Findings	36
Conclusions.....	36
Hypothesis 2.....	36
Statistical Analysis	36
Findings	37
Conclusions.....	37
Ancillary Findings Relative to Codependency and Psychopathology.....	37
Introduction.....	37
Question 1	37
Statistical Analysis	38
Findings	38
Conclusions.....	38
Question 2.....	39
Statistical Analysis	39
Findings	39
Conclusions.....	42
Validation of the IOT.....	42
Introduction.....	42
Question 1.....	42
Statistical Analysis	43
Findings	43
Conclusions.....	43
Question 2.....	44
Statistical Analysis	44
Findings	44
Conclusions.....	46
Summary of Results	47
CHAPTER V Discussion of Results and Limitations.....	51
Introduction	51
Psychopathological Symptoms Associated with Codependents	51
Discussion and Clinical Implications.....	51
Codependency and Depression	51
Codependency and Anxiety.....	53
Codependency and Compulsive Behaviors	54
Codependency and Self Depreciation.....	55

TABLE OF CONTENTS (continued)

Codependency as Predicted by Psychopathological Presentation	55
The BPI Scales as Predictors of Codependency	55
The SCL 90-R Dimensions as Predictors of Codependency	56
The SCL 90-R Indices as Predictors of Codependency	57
The Psychopathological Presentation of Codependents	57
Validation of the IOT.....	58
The IOT Total Score	59
The Five Factors of the IOT.....	59
Limitations	62
Future Research Directions.....	62
Conclusion	63
REFERENCES	65
APPENDIX A.....	74
APPENDIX B.....	75
APPENDIX C.....	76
APPENDIX D.....	77

LIST OF TABLES

<u>Table Number</u>	<u>Page Number</u>	<u>Table Title</u>
1	36	Correlations for IOT Total Score and Selected BPI Scales and SCL 90-R Primary Symptom Dimensions (<u>N</u> = 103)
2	38	Stepwise Regression Analysis of IOT Total Score as Predicted by the BPI Scales (<u>N</u> =103)
3	38	Stepwise Regression Analysis of IOT Total Score as Predicted by the SCL 90-R Primary Symptom Dimensions (<u>N</u> =103)
4	38	Stepwise Regression Analysis of IOT Total Score as Predicted by the SCL 90-R Global Indices of Distress (<u>N</u> =103)
5	39 - 40	Comparison of the Mean Scores on the BPI Scales for Codependents (<u>n</u> = 19) and Noncodependents (<u>n</u> = 17)

LIST OF TABLES (continued)

<u>Table Number</u>	<u>Page Number</u>	<u>Table Title</u>
6	41	Comparison of the Mean Scores on the SCL 90-R for Codependents ($\underline{n} = 19$) and Noncodependents ($\underline{n} = 17$)
7	43	Correlations between IOT Total Score and the BPI Scales ($\underline{N} = 103$)
8	43	Correlations between IOT Total Score and the SCL 90-R Primary Symptom Dimensions and Global Indices of Distress ($\underline{N} = 103$)
9	44 - 45	Correlations between the IOT Factors and the BPI Scales ($\underline{N} = 103$)
10	45 - 46	Correlations between the IOT Factors and the SCL 90-R Primary Symptom Dimensions ($\underline{N} = 103$)

LIST OF TABLES (continued)

<u>Table Number</u>	<u>Page Number</u>	<u>Table Title</u>
11	46	Correlations between the IOT Factors and the SCL 90-R Indices of Distress (<u>N</u> = 103)
12	52	Psychopathological Symptoms Associated with Codependents
13	61	Sample Items from the IOT, BPI and SCL 90-R

CHAPTER I

Introduction

Codependency is a useful therapeutic concept that requires a broadened empirical base. Although codependency is a relatively recent descriptor in the chemical dependency field, there has been a proliferation of journal articles, treatment strategies, workshops and self-help books (Beattie, 1987; Cermak, 1984, 1986a, 1986b, 1991; Kaminer, 1992; Mendenhall, 1989; Subby, 1987; Wegscheider Cruse, Cruse & Bougher, 1990; Wilson Schaef, 1986). A review of the codependency literature indicates that despite the lack of agreement on an operational definition of codependency and inadequate measurement tools (Gierymski & Williams, 1986; Gomberg, 1989; Harper & Capdevila, 1989), there is tentative agreement among many practitioners in the chemical dependency field that codependency is a legitimate and definable diagnostic entity (Beattie, 1987; Cermak, 1986a; Friel & Friel, 1988; Gierymski & Williams, 1986; Subby, 1987; Wilson Schaef, 1986; Whitfield, 1984, 1989, 1991). Of major concern, however, is the paucity of empirical research (Cermak, 1984, 1986a, 1986b, 1991; Gomberg, 1989; Gierymski & Williams, 1986; Morgan, 1991) and the absence of valid and reliable psychometrically derived instruments to diagnose and/or assess codependency (Alexander, 1992; Cermak, 1984, 1986a, 1986b, 1991; Friel, 1985; Potter-Efron & Potter-Efron, 1989; Sim, 1991). This research project provides an objective, quantitative basis to examine the concept of codependency as a psychological construct.

Defining and Measuring Codependency

Perspective of the Problem

Part of the controversy surrounding the codependency construct is that the term "co-dependency" has been utilized to encompass a myriad of definitions and

etiologies. Initially, terms such as "co-alcoholism", "enabler" and "co-dependency" were used interchangeably to describe the personality traits and behaviors associated with the wives of alcoholics as a function or causative agent of their husband's alcoholism (Ballard, 1958; Clifford, 1960; Corder, Hendricks & Corder, 1964; Price, 1944; Rae & Forbes, 1966). More recent literature shifted away from this latter focus on codependency as a causative factor in alcoholism and instead focused primarily on codependency as a specific condition arising in a spouse from prolonged exposure to substance abuse in a partner (Burgin, 1976; Edwards, Harvey & Whitehead, 1973; Hanks & Rosenbaum, 1977). Contemporary literature includes a further broadening of this definition from dysfunctional traits and behaviors arising in the spouse as a consequence of alcohol/chemical dependence in their partner (Gierymski & Williams, 1986; Asher & Brissett, 1988), to include other family members (Black, 1981; Wegscheider, 1981; Woititz, 1983) and finally further expanded to a view that codependency is a specific condition that arises as a consequence of prolonged exposure to any highly dysfunctional family system (Beattie, 1987; Gierymski & Williams, 1986; Prest & Protinsky, 1993; Subby, 1987; Whitfield, 1989, 1991).

Inherent in each of these varied definitions is a concomitant theory of etiology including a behavioral orientation (Whitfield, 1984), a personality disorder model (Cermak, 1984, 1986a, 1986b, 1991), an ego psychology paradigm (Friel & Friel, 1988; Subby, 1987), a sociological perspective (Wilson Schaef, 1986) and a combined intrapsychic view (Wegscheider Cruse, Cruse & Bougher, 1990) all of which are primarily based on clinical observations, self-diagnosis and retrospective case analysis. The noticeable lack of scientifically oriented research (Cermak, 1984, 1986a, 1986b, 1991; Gomberg, 1989; Gierymski & Williams, 1986; Morgan, 1991) which would address the contradictions in definitions and conceptual

structure of codependency as a psychological construct encourages subjective diagnoses (Harper & Capdevila, 1990; Potter-Efron & Potter-Efron, 1989) and raises serious questions about professional ethics and therapeutic efficacy (Harper & Capdevila, 1990). Such uncritical acceptance of codependency as a legitimate diagnostic entity without supporting empirical research seems to be radically at odds with the primary obligation of the helping professions to "first of all, do no harm" (Becvar, Becvar & Bender, 1982).

Existing Measures of Codependency

Perhaps even more alarming is that despite acknowledgment of the serious consequences of imprecise measurement in the assessment, diagnosis and treatment of codependency and the lack of consensus on definition and etiology, many measurement instruments in this area have been developed solely on the basis of face validity. Four of the resulting instruments have varying degrees of psychometric soundness.

Friel Co-dependency Assessment Inventory (CAI)

Friel (1985) developed a set of questions based on his definition and conceptual model of codependency. He asked other counsellors to utilize the 60-item CAI in order to gather data to develop a psychometric instrument. Although Friel acknowledges the clinical need for a psychometrically valid and reliable instrument to measure degree of codependency (Friel, 1985, p.20), the process he has utilized to develop the CAI does not adhere to the procedures for test development found in the American Psychological Association Standards for Educational and Psychological Testing (APA) (1985).

The Codependency Assessment Questionnaire (CAQ)

In 1989, the Potter-Efrons developed the CAQ to assist in the assessment of codependency. This questionnaire suffers from some of the same difficulties as the

CAI. The Potter-Efrons fail to outline the process utilized in the development of the questions contained in their instrument and provide no information on what criteria or statistical method was used to determine the cut-off point for establishing the presence of and/or degree of codependency.

Spann Fischer Codependency Scale (CDS)

Similarly, the procedure used to develop the CDS (Fischer, Spann, & Crawford, 1991) raises serious questions about the content validity of its items. Neither the criteria nor statistical methodology utilized to select the characteristics of codependency included in the definition of codependency that the CDS is purported to measure is delineated. As well, the process utilized to generate the items included in this test is not described.

The Individual Outlook Test (IOT)

In contrast, Sim (1991) provides a detailed presentation of the process utilized to develop the 60-item, Individual Outlook Test (IOT), an instrument designed to measure the degree of codependent orientation. The codependency construct that forms the basis of the IOT is presented within a conceptual framework that specifies its meaning and distinguishes it from other constructs and definitions of codependency (p. 9-14). The initial process and statistical methodology used for selecting the content and the items included is clearly presented (p. 15-33) and normative data intended to extend the validity network of the IOT is outlined (p. 34-37). In addition, the subsequent research conducted by Alexander (1992) and Worth (1992) contributed further to the validity network of the IOT and culminated in 1993 in the publication of the IOT and the IOT Manual for utilization in clinical research and practice (Sim & Fox, 1993; Worth, Fox, Sim, & Macnab, 1993).

The specific definition of codependency that is measured by the IOT is "a persistent, self-defeating pattern of intra- and interpersonal relationships that arises out of a dysfunctional family system and is characterized by poor self-worth, dependency, disturbed emotional development, anxiety, and driven by an extreme external locus of control" (Alexander, 1992, p.39). As this definition encompasses many of the descriptors and characteristics of codependency cited in the literature, it is considered to be the operational definition of codependency for this research project.

The Relationship between Codependency and Psychopathology

Sim's (1991) 14 descriptor categories for codependency derived from the codependency literature suggest that there are a number of constructs potentially related to codependency. For example, certain forms of psychopathology such as depression, compulsive behaviors and anxiety should be positively related to codependency (Arnold, 1990; Beattie, 1987; Cermak, 1991; O'Brien & Gaborit, 1992; Fischer, Spann & Crawford, 1991; Wilson Schaef, 1986) and self-esteem negatively related (Friel & Friel, 1988; Subby, 1987). Neither the initial or subsequent research using the IOT has addressed this area. Concurrent administration of the IOT and tests that measure traditional forms of psychopathology would provide a way to examine the relationship between psychopathology and codependency as well as to further evaluate the construct validity of the IOT.

Conclusion

The overall intent of this research is to provide an objective basis from which to examine the concept of codependency and to enhance the conceptual, research and therapeutic value of codependency as a psychological construct. This will be accomplished by: (a) examining the relationship between codependency, as

measured by the Individual Outlook Test (IOT) (Sim & Fox, 1993), and psychopathology and personality, as measured by the Basic Personality Inventory (BPI) (Jackson, 1989) and the Symptoms Checklist 90-R (SCL 90-R) (Derogatis, 1992), and (b) gathering data using the IOT in order to examine the validity network of this instrument.

CHAPTER II

Literature Review

Introduction

No single, unified conceptualization of codependency currently exists. This is primarily attributable to the absence of a valid and reliable psychometrically derived instrument to assess codependency and the concomitant lack of quantitative research. No attempt will be made in this literature review to provide a complete critical review of all the codependency literature. Rather, the focus will be on two core issues: (a) the postulated relationship between codependency and psychopathology and, as this can be examined empirically with a valid and reliable assessment tool, (b) on attempts that have been made to develop a psychometrically sound instrument to measure codependency. Readers requiring an in-depth overview of the historical and conceptual development of codependency are referred to Alexander (1992) and Sim (1991).

Codependency and Psychopathology

Conceptualizations of codependency range from a "primary disease" (Wegscheider, 1981; Whitfield, 1984; Young 1987) to an "addiction" similar to chemical dependency in its processes and treatment goals (Peele & Brodsky, 1975; Wilson Schaefer, 1986) and, more recently, to codependency as a personality disorder (Cermak, 1984, 1986a, 1986b, 1991; Coleman, 1987; Smalley & Coleman, 1987). In addition, while many of the symptoms of codependency delineated in the literature are seen as interconnecting, contributing to and perpetuating pathological patterns of behavior (Arnold, 1990; Cermak; 1984, 1991; Haaken, 1993; Potter-Efron & Potter-Efron, 1989; Walfish, Stenmark, Shealy & Krone, 1992), a review of the literature indicates that there is little research that

quantitatively addresses the nature of the relationship between codependency and psychopathology.

Codependency as a Personality Disorder

Cermak's (1986a) book represents the first attempt to offer diagnostic criteria for codependency and to characterize it as a form of psychopathology. Although there is little agreement about whether codependency has diagnostic legitimacy, let alone that it is a pathological disease entity, Cermak's use of the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (DSM-III-R) (American Psychiatric Association, 1987) to develop diagnostic criteria for codependency represents a needed movement to a more rigorous and systematic investigation of codependency.

Without such criteria, no standards exist for assessing the presence and depth of pathology, for developing appropriate treatment plans, or for evaluating the effectiveness of therapy. Treatment team members are hindered in their efforts to communicate clearly and understandably about specific clients, and comparison studies of co-dependency are not possible. Unless we begin gathering reliable and valid research data, co-dependence will remain confined to clinical impression and anecdote (Cermak, 1986a, p. 3).

Cermak's personality disorder model (1984, 1986a, 1986b, 1991) moves codependency into a psychopathological framework. Critics of contemporary codependency literature voice a justifiable concern that persons could be labeled and exploited for characteristics that exist, in varying degrees, in most people (Gomberg, 1989; Gierymski & Williams, 1986; Haaken, 1990; Morgan, 1991; O'Brien & Gaborit, 1992). Cermak (1986a) suggests that the answer to this dilemma lies in the distinction between personality traits and personality disorders.

According to the DSM-IV, "personality traits are enduring patterns of perceiving, relating to, and thinking about the environment and oneself that are exhibited in a wide range of social and personal contexts" (p. 630). Personality traits do not constitute personality disorders until they become "inflexible and maladaptive and cause significant functional impairment or subjective distress . . ." (p. 630). As Cermak (1986a) notes:

The critical point for our purposes is that while co-dependent traits may be widespread, *the diagnosis of Co-Dependent Personality Disorder can only be made in the face of identifiable dysfunction resulting from excessive rigidity or intensity associated with these traits* (p. 10).

Although codependency has been described as resembling the Dependent Personality Disorder (Coleman, 1987; Smaller & Coleman, 1987), Cermak (1986a) rejects this as not embodying the true complexity of codependency. Rather, a classification of codependency as a Mixed Personality Disorder is suggested as a way of encompassing the variety of symptoms observed in codependents (Cermak, 1986a, 1986b). The DSM-IV replaced Mixed Personality Disorder with the Personality Disorder Not Otherwise Specified classification and indicates that this category can be utilized when an individual exhibits "features of more than one specific Personality Disorder that do not meet the full criteria for any one Personality Disorder ("mixed personality"), but together cause clinically significant distress or impairment in one or more important areas of functioning (e.g., social or occupational)" (p. 673). Cermak (1991) proposes that "the formal designation would be Personality Traits/Disorder Not Otherwise Specified (Co-Dependent Type) 301.90" (p. 270).

Cermak's diagnostic criteria provide the framework to integrate codependency into the standard nomenclature of the DSM-IV and differentiates it

from other forms of psychopathology. However, the personality disorder model of codependency has not met with widespread acceptance (Gomberg, 1989; Harper & Capdevila, 1990). It has been criticized on the ground that the symptoms described in the literature are so numerous and diverse " that it would require four separate *DSM* categories to contain it, combining characteristics found in Alcoholism, and the Dependent , Borderline, and Histrionic Personality Disorders, as well as an additional category made up of 'associated features' " (p. 289). Although Cermak's diagnostic criteria may be useful as descriptors of a codependent orientation, the lack of quantitative research to support the personality disorder model of codependency raises some justifiable concerns. In this model

we have moved . . . [the concept of codependency] from the impact of a substance abusing member on other family members to anyone who grew up in an 'emotionally repressive family', to psychiatric diagnosis and treatment of the family member . . . " (Gomberg, 1989, p. 116).

It is questionable whether pathologizing codependency into a personality disorder by " . . . introducing a syndrome for which there are inadequate theoretically established boundaries and meanings and which lacks empirical support" (Gierymski & Williams, 1986, p. 12) supports the primary obligation of helping professions to "first of all, do no harm" (Becvar et al., 1982). Also, there is concern that labeling those individuals who are codependent as having a personality disorder may negatively impact on the process of recovery. For as Cermak (1986a) himself notes "character disorders are often considered difficult to treat successfully" (p. 101).

A review of the literature to date indicates that Cermak's diagnostic criteria has not been supported by empirical research. Use of the Minnesota Multiphasic Personality Inventory (MMPI) with 207 white females identified as codependent

using Cermak's diagnostic criteria revealed no codetypes specifically indicative of codependency (Martin, 1991). Martin (1991) concludes that while codependency might be a useful descriptive label for those individuals exhibiting dysfunctional behaviors, it is not suitable as a diagnostic label for a personality disorder or any other clinical syndrome. Cermak (1986a) himself states that "the process of pathologizing human behavior is dangerous and should be entered into only under the weight of compelling evidence " (p. 100). At this time, the 'compelling evidence' for codependency as a personality disorder, which by necessity needs to be quantitative, is not available.

The Relationship between Codependency and Psychopathology

Sim's (1991) 14 descriptor categories for codependency derived from the codependency literature suggest that there are a number of constructs potentially related to codependency. For example, depression, anxiety and compulsive behaviors should be positively related to codependency and self-esteem negatively related (Alexander, 1992; Arnold, 1990; Cermak, 1984, 1986a, 1986b; El-Guebaly, Staley, Leckie & Koensgen, 1992; Fischer et al., 1991; Friel & Friel, 1985; Mendenhall, 1989; Sim, 1991; Walfish et al., 1992). Also, Beattie (1987) enumerates numerous problems and psychopathological conditions, from neurosis to personality disorder and psychotic conditions, that are all subsumed under the umbrella of codependency. However, empirical evidence is not available to support these suppositions primarily because of the absence of a psychometrically derived instrument to measure codependency.

Diagnosing and Measuring Codependency

In the rapidly expanding field of codependency, the development of a valid and reliable psychometrically derived instrument is urgently needed (Alexander, 1992; Cermak, 1986a; Friel, 1985; Harper & Capdevila, 1990; Potter-Efron &

Potter-Efron, 1989; Sim, 1991) to determine whether codependency is a recognizable and measurable psychological construct and to examine the nature of the relationship between codependency and psychopathology. In addition, as the primary obligation of helping professionals is to "first of all, do no harm" (Becvar et al., 1982), it can be postulated that it becomes a professional responsibility to either develop a valid and reliable instrument to measure codependency in order to address the present ethical and therapeutic consequences of imprecise measurement, vague definition and subjective diagnosis or to provide empirical evidence to definitively refute the diagnostic legitimacy of codependency (Becvar et al., 1982; Cermak, 1986a; Gierymski & Williams, 1986; Harper & Capdevila, 1990).

Given the varying conceptualizations, definitions and etiologies regarding codependency, the development of a psychometrically valid and reliable instrument to measure and/or diagnose codependency is a complex task. Inherent in any attempt that adheres to the American Psychological Association Standards for Educational and Psychological Testing (APA) (1985) guidelines for test development is the formulation of a definition of codependency with objective criteria for diagnosis and/or measurement and the undertaking of empirical research using adequate diagnostic criteria to verify or refute the existence of codependency as a reliable, valid and measurable entity that is distinct from other psychological constructs. In addition, without such an instrument it is impossible to examine the postulated relationship between codependency and psychopathology.

Existing Attempts to Develop Instruments to Measure Codependency

A variety of measures of codependency are currently being used for clinical and research purposes (Fischer & Beer, 1990; Brewer, Zawadski & Lincoln, 1990; Snow & Willard, 1989). A number of these fail to adhere to the guidelines for test development contained in the APA (1985). Additionally, they are primarily based

on face validity and have few, if any, psychometric properties. For example, Snow and Willard (1989) adapted a 121-item self-assessment inventory to measure codependency in practicing nurses but acknowledge that the statements in the inventory are based on personal and professional judgments as to what comprises codependency and not on any statistical technique (p. 38). Fisher and Beer (1990) created a questionnaire based on the work of Beattie (1987). Although 25 codependent characteristics in ten of the 14 categories identified by Beattie (1987) were included in the questionnaire (Fisher & Beer, 1990), validation procedures were not provided. While Brewer, Zawadski, and Lincoln's (1990) research on the characteristics of alcoholics and codependents who did and did not complete treatment requires a diagnosis of codependency for a participant to be included in the study, a description of the diagnostic procedures used is not included. However, the increasing emphasis in the codependency literature on the need for a psychometrically derived instrument (Alexander, 1992; Cermak, 1984, 1986a, 1986b, 1991; Friel, 1985; Harper & Capdevila, 1990; Potter-Efron & Potter-Efron, 1989; Sim, 1991) has resulted in the development of four instruments which demonstrate varying degrees of psychometric soundness.

Friel Co-dependency Assessment Inventory (CAI). In 1985, Friel developed a set of 60 questions to measure degree of codependency. The questions are based on Friel's definition and conceptual model of codependency which he developed from subjective clinical impressions:

Codependency is a dysfunctional pattern of living which emerges from our family of origin as well as our culture, producing arrested identity development and resulting in an over-reaction to things outside of us and an under-reaction to things inside of us. Left untreated, it can deteriorate into an addiction (Friel & Friel, 1988, p. 157).

The questions in the CAI appear to address the symptomatology Friel associates with being codependent and are subsumed under "dysfunctional pattern of living" in his definition. These include

. . . depression, tolerance of inappropriate behavior, dulled or inappropriate affect, self-defeating coping strategies, strong need to control self and others, stress-related physical symptoms, abuse of self, neglect of self, difficulty with intimacy and/or sexuality, fear of abandonment, shame, inappropriate guilt, eventual addictions, [and] rages . . . " (p. 157).

The CAI is intended to be used as either a self-exploration tool or in clinical practice (Friel & Friel, 1988, p. 163). The response format calls for a true or false answer for the 60-items. Scoring is accomplished by totaling 1 point for each "true" response to even-numbered questions and 1 point for each "false" response to odd-numbered items with a maximum score of 60 (p. 163). This format is designed to control for acquiescent response sets (Friel, 1985, p. 21). According to Friel and Friel (1988), scores from 10 to 20 indicate mild codependency concerns, 21 to 30 mild/moderate, 31 to 45 moderate/severe and over 45 severe concerns (p. 163). However, the empirical basis for the interpretation of the scores on the CAI is not presented.

Friel (1985) asked other counsellors to utilize the 60-item CAI in order to obtain data to enhance the psychometric properties of the instrument. To date, whatever data has been collected has not been published. Also, it can be concluded that the process used by Friel to develop the CAI violates many of the procedures for test development outlined in APA (1985) and is based primarily on face validity.

Despite the limitations of the process used in developing the CAI, some preliminary research results using the CAI are available. Elliott (1991) sought to examine the construct validity of the CAI via its relationship with the Adjective

Check List (ACL) which measures well-researched personality traits. The results suggest that these two inventories are independent and provide some limited support for the construct validity of the CAI (Elliott, 1991). West-Willette's (1990) study to assess the internal consistency of the CAI did not find significant differences in the factor structure of the CAI between a group of women having a positive history of alcoholism in family members and a group of women with a negative history of alcoholism in family members. However, the high codependency scores on the CAI for both groups of women raises questions about the construct, content and discriminate validity of the CAI. It is evident that further empirical research is required before the CAI can be accepted as a valid and reliable measurement of codependency.

The Codependency Assessment Questionnaire (CAQ). Recognizing the need for an instrument to utilize in the assessment process, the Potter-Efrons (1989) developed the CAQ. Based on clinical judgment, the CAQ was designed to measure a specific, limited concept of codependency:

A co-dependent is an individual who has been significantly affected in specific ways by current or past involvement in an alcoholic, chemically dependent, or other long-term, stressful family environment. Specific effects include: (a) fear; (b) shame/guilt; (c) prolonged despair; (d) anger; (e) denial; (f) rigidity; (g) impaired identity development; and (h) confusion
(p. 39)

The questionnaire is organized according to the eight major characteristics, or specific effects, that the Potter-Efrons believe are most frequently found in codependent individuals. Subsumed under each category are a series of questions that appear to describe behaviorally the characteristic being assessed. For any category to be considered positive for codependency, a minimum of two questions

in that category must be answered in the affirmative. In addition, codependency can be assessed when:

1. The individual has been or is currently exposed to a long-term highly stressful family environment, including but not limited to alcohol dependency of another family member.
2. The individual reports (or is observed to have) at least 5 of the . . . 8 characteristics" (p. 39).

The CAQ is intended to be administered as part of a one-to-one assessment interview process and not used as a self-assessment tool.

Unfortunately, there is no information provided on what criteria or statistical method was used to determine the cut-off point for establishing the presence and/or degree of codependency. Although each of the characteristics/categories is described behaviorally, there is no information provided to suggest that the process utilized in the development of the questions for the CAQ or the categories have an empirical basis or adhere to the APA (1985) guidelines for test development. As a further review of the literature did not reveal any psychometric data for the CAQ, further quantitative research is required before the CAQ can be deemed valid and reliable for clinical use in diagnosing codependency.

Spann-Fischer Codependency Scale (CDS). The 15-item CDS (Fischer et al., 1991) is a short, paper-and-pencil measure of codependency. The working definition of codependency which the scale is purported to measure is:

[a] psychosocial condition that is manifested through a dysfunctional pattern of relating to others. This pattern is characterized by: extreme focus outside of self, lack of open expression of feelings, and, attempts to derive a sense of purpose through relationships (Spann & Fischer, 1990, p. 27).

Although the authors indicate that this definition is based on " . . . eighteen overlapping characteristics which they collapsed into three areas for a working definition of codependency . . . " (Fischer et al., 1991, p. 88), the criteria and/or statistical methodology utilized to select the eighteen characteristics is not delineated.

A 38-item pilot instrument based on the 1990 Spann and Fischer definition was developed and reviewed by experts (Fischer et al., 1991, p. 91). However, the qualifications of the experts and the results of their review is not outlined. Also, the process utilized to generate the 38 items is not described nor the relationship of these questions to the three areas contained in their definition of codependency. Items that had item-total correlations below .30 were omitted leaving a 15-item scale (p. 91). Test-retest reliability of the 15-item CDS has a correlation of .87 and internal consistency Cronbach's alphas of .86 at both time 1 and time 2 (p. 91). While this shortened scale is claimed " . . . to [retain] all the essential characteristics of codependency developed in the working definition . . ." (Fischer et al., 1991, p. 91) there is no evidence as to the representativeness of the 15 questions over the three areas. In addition, a 16th item is added (Fischer et al., 1991, p. 91) with no reason given for its inclusion.

The CDS calls for responses on a six-point Likert type scale. To obtain a scale score, the items are summed with reverse scoring for items 5 and 7 (Fischer et al., 1991, p. 100). Although the authors do not state the reason for the reverse scoring, it is assumed that it is related to controlling for response-set bias. Higher scores on the CDS are reflective of greater codependency (p. 91). Although mean scores for the 5 groups utilized in the research design are reported, the meaning of the resultant scores in terms of codependent orientation is not discussed.

One of the conclusions reached by Fischer, Spann and Crawford is that the content validity of the CDS has been established " . . . through review by experts in the field as well as by factor analysis which revealed support for the definition out of which the scale was derived . . . " (1991, p. 95). However, the above mentioned process for the development of the CDS appears to violate two important guidelines for test development as outlined by the APA (1985). Standard 1.6 states that,

. . . the procedures followed in generating test content to represent that universe should be described. When the content sampling is intended to reflect criticality rather than representativeness, the rationale for the relative emphasis given to critical factors in the universe should also be described carefully (p. 14).

In addition, Standard 1.7 indicates that "when subject-matter experts have been asked to judge whether items are an appropriate sample of a universe . . . the relevant training, experience, and qualifications of the experts should be described" (p. 15). It is questionable whether either of these Standards have been adequately addressed in the development of the CDS.

Although the procedures and research results outlined by Fischer et al. (1991) are empirically based and Fischer et al. (1991) conclude that the CDS has satisfactory construct, concurrent, convergent and discriminatory validity, it is evident that shortfalls in methodology call their claims into question. Additional evidence to substantiate a claim of adequate validity is needed before the psychometric properties of this instrument are sufficient to warrant its use in the clinical assessment of codependency.

The Individual Outlook Test (IOT). In 1991, Sim developed the 33-item Individual Outlook Test. The definition of codependency this instrument purports to measure is " . . . a persistent, self-defeating pattern of intra[personal] and

interpersonal relationships characterized by poor self-worth, dependency, disturbed emotional development, and anxiety, and driven by an extreme external locus of control" (Alexander, 1992, p. 39).

In contrast to the Friel Co-dependency Assessment Inventory (CAI) (Friel, 1985), the Codependency Assessment Questionnaire (CAQ) (Potter-Efron & Potter-Efron, 1989) and the Spann-Fischer Codependency Scale (CDS) (Fischer, Spann & Crawford, 1991), the process utilized in the development of the IOT appears to embody many of the APA guidelines for test development. Sim (1991) based the development of test items for the IOT on a qualitative study of the codependency literature which identified 11 basic reference sources on which the major part of the literature was dependent (p. 25-26). Content analysis of these sources yielded 117 descriptors which could be subsumed under 14 descriptor categories (p. 24). Initially, 174 test items, with 19 forced negative items to control for response bias, were generated with the number of items allocated to each of the 14 categories determined by the incidence of citation in the 11 basic reference sources (p. 25-26). Sim (1991) states that a panel of three judges familiar with the concept of codependency assisted in the modification and/or elimination of items to arrive at a 100-item IOT which was administered to a sample of $N = 178$. After analysis of the responses of the sample, Sim (1991) constructed what she indicated was a parsimonious valid version of 60 items.

This portion of Sim's (1991) work clarifies the codependency construct within a conceptual framework that specifies its meaning and distinguishes it from other definitions of codependency (APA, 1985). Her procedure for item development outlines the criteria used to select items as representative of the codependency construct and the rationale for the relative emphasis given critical factors in this universe (APA, 1985). However, Sim fails to specify the number of

questions and which ones are allocated to each descriptor category and does not indicate if the final 60-item IOT maintains the emphasis given to critical factors in the original item pool. Also, Sim (1991) provides no description of the relevant training, experience and qualifications of her three judges (APA, 1985, p. 15). Sim's conclusion that the content validity of the IOT has been established through adherence to specific content described in the codependency literature and the acceptance of only those items which three competent judges were in accord (p. 32) needs to be considered within the context of these omissions.

Sim's (1991) answer and scoring protocol for the IOT calls for responses to be made on a five point Likert type scale. Of the 60 items in the IOT, 54 have five weightings of 5, 4, 3, 2, and 1 from strongly agree to strongly disagree and 6 items have reverse weightings to control for response-set bias (p. 32). The reverse weightings are accounted for at the time of scoring. The higher the total score derived from the addition of these two types of weightings, the higher the codependent orientation (p. 33). A classification system, derived from the mean and standard deviation of the normative group ($N = 300$), is provided to use in the interpretation of the IOT Total score (Worth, 1992; Worth et al 1993). According to this classification system, T-scores below 30 are classified as "clinical alert" because of the need to examine the score in relationship to other clinical data while T-scores between 30 and 49 are classified as having "little clinical significance". T-scores between 50 and 59 indicate a mild codependent orientation, 60 to 69 moderate, and 70 and above, a severe codependent orientation (Worth, 1992; Worth et al, 1993). However, the classification system is based on a normative group ($N = 300$) selected using a non-probability sample of convenience (Sim, 1991) and which over-represents married individuals ($n = 187$) and those between 20 and 30 years of age ($n = 207$) and under-represents males ($n = 111$) and those of

both sexes under 19 years of age ($n = 3$), middle-aged ($n = 73$) and elderly persons ($n = 17$) and comes from a restricted geographic area (Worth, 1992).

Criterion-related validity for the IOT was evaluated by comparing the scores of professionally diagnosed codependents ($N = 45$) and a sample ($n = 45$) matched along age, gender, and socio-economic lines drawn from the norm group ($N = 300$) (Alexander, 1992, $n = 18$; Sim, 1991, $n = 18$; Worth, 1992, $n = 9$). The IOT Total score was able to discriminate between individuals with a high degree of codependent orientation and both the matched sample from the norm group and the normative group itself (Alexander, 1992; Sim, 1991; Worth, 1992). Although Sim (1991) indicates that codependent behaviors can arise out of any dysfunctional family system, the empirical research to date has focused exclusively on a small sample of individuals who come from families in which there was alcohol and substance abuse.

Construct validity of the IOT has been evaluated through three factorial studies. Alexander's (1992) factor solution using a principal axis factor analysis with an oblimin (oblique) rotation and the author's (Worth, 1992) principal components analysis with a varimax rotation performed on the normative sample ($N = 300$), which included Alexander's subjects ($n = 275$), both extracted five factors with eigenvalues greater than 1.0 and resulted in similar clusters of items. The five factors correspond to five main characteristics of codependency and are designated as: I. Self-Esteem/External Referencing; II. Anxiety; III. Dysfunctional Family of Origin; IV. Dysfunctional Relationships/External Locus of Control; and V. Dependency within Relationships (Alexander, 1992). As both solutions account for a relatively small amount of the total variance, 27 % (Alexander, 1992) and 33% (Worth, 1992) respectively, it appears that the variability of the data is accounted for by factors unrelated to the five identified. This may suggest that some of the

constituent parts of codependency are not probed by the IOT or, as the critics of the codependency literature suggest (Gierymski & Williams, 1986; Gomberg, 1989; Harper & Capdevila, 1990), that the codependency construct itself lacks diagnostic legitimacy. A third factorial study by Vervoort, Korabik and Bellerby (1993) using eighty-one male and 185 female ($N = 266$) undergraduate psychology students at the University of Guelph supported the five dimensions found by both Alexander (1992) and Worth (1992) and proposed a sixth factor comprised of eight items related to "a concern for the welfare and feelings of others" (p. 10). However, further research is required to provide evidence that this sixth cluster of items has a psychological meaning in terms of codependency that is distinct from the five other factors.

Alexander (1992) evaluated the convergent validity of the IOT by comparing the IOT to another index of codependency, the Codependency Questionnaire (CAQ) (Potter-Efron & Potter-Efron, 1989). While the CAQ appears to measure the same construct as the IOT, there is little empirical evidence on which to base this assumption. However, as Alexander's work represents a preliminary study of the validity of the IOT, such initial evidence of theory validation is admissible (APA, 1985). Alexander concluded that the extent of agreement between the IOT and the CAQ ($r(18) = .89, p \leq .05$) indicated that there is a strong positive and significant relationship between the two tests which supports the contention that the IOT has convergent validity (p. 37). However, it is possible that the high correlation between the two instruments may have been influenced by the small sample size ($N = 18$) combined with a within group heterogeneity which may have positively influenced the size of the correlation, and to a lesser extent, by social desirability factors which the literature suggests codependents are particularly prone to (p. 37).

Divergent validity was evaluated by comparing the IOT, an index of codependency, to the Otis Quick-Scoring Mental Ability Tests, GAMMA: Form BM, For Senior High Schools and Colleges (Otis) (Otis, 1965), a measure of IQ (Worth, 1992). The extent of the correlation between the IOT and the Otis ($r(29) = -.141$) indicates that there is not a significant relationship between the two tests and suggests that the IOT is not measuring the construct of IQ.

Evaluation of the internal consistency reliability of the IOT resulted in Cronbach alphas of $r(300) = .91$ for the normative group and $r(45) = .94$ for the codependent criterion group (Worth, 1992, p. 40). Test-retest reliability over a three to four week period yielded a Pearson Product Moment Correlation of $r(13) = .98$ with a Standard Error of Measurement of 4.26 score points (p. 40). However, these results may be somewhat spurious. The limited size of the sample ($N = 13$) and the homogeneity of the sample in terms of demographic characteristics could be contributing to the high reliability coefficient. Prior to accepting Sim's (1991) conclusion that the IOT has a high level of test-retest reliability, further empirical evidence is required.

Conclusion

The conceptual, research and therapeutic value of codependency as a psychological construct is limited by the lack of quantitative research. In the literature review, various attempts at developing instruments to measure and/or diagnose codependency were described. Of the four attempts that have resulted in tools with varying degrees of psychometric soundness, the IOT more closely adheres to the APA (1985) guidelines and test theory (Crocker & Algina, 1986) and has preliminary evidence of construct, content and criterion validity and reliability. The IOT provides the psychometric instrumentation that is needed to examine the relationship between codependency and psychopathology.

This research will provide empirical evidence from which to examine the relationship between codependency as measured by the IOT and more traditional measures of personality and psychopathology. In addition, the data gathered in this study will provide a basis from which to evaluate the validity network of the IOT.

Research Hypotheses

In the present research, data will be collected on codependency, as measured by the IOT, and personality and psychopathology, as measured by the Basic Personality Inventory (BPI) (Jackson, 1989) and the Symptoms Checklist 90-R (SCL 90-R) (Derogatis, 1992), in order to examine the following research hypotheses:

1. There will be a positive relationship between codependency and depression, anxiety and compulsive behaviors.
2. There will be a positive relationship between self depreciation and codependency.

Also, within the context of this research, the use of step-wise multiple regression is intended to contribute to an understanding of the components of codependency by objectively determining types of psychopathology and/or personality characteristics predictive of codependency. Independent t-tests will be utilized to determine whether there is a significant difference between two groups, those with and those without a codependent orientation as determined by the IOT Total score, in terms of psychopathology and personality, as measured by the BPI and SCL 90-R. In addition, the collected data will be used to examine the validity network of the IOT.

CHAPTER III

Methods and Procedures

Introduction

The psychometrically derived Individual Outlook Test (IOT) (Sim & Fox, 1993) provides a means to measure codependency and makes it feasible to conduct empirically based research designed to examine the relationship between codependency and psychopathology while simultaneously continuing the validation of the IOT. The operational definition of codependency for the IOT and for the purposes of this study is ". . . a persistent, self-defeating pattern of intra[personal] and interpersonal relationships characterized by poor self-worth, dependency, disturbed emotional development, and anxiety, and driven by an extreme external locus of control" (Alexander, 1992, p. 39). The Basic Personality Inventory (BPI) (Jackson, 1989), designed to measure personality and psychopathology, and the Symptoms Checklist 90-R (SCL 90-R) (Derogatis, 1992) designed to measure psychological symptoms associated with psychopathology, are used to allow the examination of the degree to which the major behavioral and intra-psychic characteristics measured by the IOT relate to more traditional measures of personality and psychopathology and to extend the validity network of the IOT.

Sampling Method and Procedure

As the occurrence of codependency within a normal population is considered to have a distribution that approximates a normal curve (Andrew, 1992; Worth, 1992; Worth et al., 1993), nonprobability convenience sampling procedures were utilized in this research. In addition, while moderator variables such as marital status, gender, age, socioeconomic and educational status and occupation do not significantly affect IOT scores (Worth et al., 1993), gender does affect scores on both the BPI and SCL 90-R. The sample selected was thus stratified on the basis of

gender. As can be seen in Appendix A and B, the sample also represents considerable diversity in terms of age, marital status, socioeconomic and educational and occupational status.

A sample of 103 female and male adults, 18 years and over, was obtained from Edmonton, Alberta and area, St. Paul and Whitecourt, Alberta, St. Boniface, Manitoba, Saskatoon, Saskatchewan and Prince George, British Columbia, using a nonprobability sample of convenience utilizing a snowball technique. While some of the subjects were known to the researcher, the majority were not. The sample was composed of 50 adult females and 53 adult males. The age range was from 18 years to 69 years with a mean age of 38.5 years and a standard deviation of 12.9 years.

From the sample ($N = 103$) two groups were selected based on total IOT score - codependents (T-scores ≥ 60) ($n = 19$) and noncodependents (T-scores ≤ 40) ($n = 17$). The codependent group is comprised of 12 females and 7 males with an age range from 20 to 69 years ($M = 38.2$; $SD = 13.5$) and the noncodependent group of 7 females and 10 males with age ranging from 22 years to 62 years ($M = 39.5$; $SD = 12.6$).

Data Collection Method and Procedure

Individuals were contacted in person or by phone and those agreeing to participate were given a test package. Packages contained an information sheet describing the study, a consent form, a demographic data sheet requesting information on the subject's age, gender, and marital status, the BPI, 1 computer answer sheet, the IOT and the SCL 90-R. To ensure confidentiality and anonymity of response, subjects were requested to complete the consent form using their actual name, seal it in an envelope provided and return this envelope separately to the researcher. A codename chosen by the subject and unknown to the researcher was

then used on the IOT, BPI, SCL 90-R and demographic data sheet and submitted to the researcher in a second, separate envelope. As it was likely that some subjects would want a debriefing on their test results and in order to ensure adherence to ethical standards, subjects were given the option on the consent form to waive anonymity to the researcher by providing their codename and to request an in-person debriefing of the results by the researcher. Appendix C provides information related to the debriefing process. In addition, subjects were informed that they could discontinue participation at any time.

It is recognized that subjects who agreed to participate may have different characteristics from those who would choose to not participate in this research project and this will have to be weighed when generalizing from the results. In addition, the restricted geographic area for subject selection will also impinge upon the total generalizability of the results. The self-report nature of the IOT, BPI and SCL 90-R means that there are social desirability pressures on respondents. Therefore generalization of the results of this study will also have to be made accordingly.

Instrumentation

The Individual Outlook Test (IOT)

The IOT (Sim & Fox, 1993) is a 60-item, pencil and paper, self-report measure of codependent orientation in adults. Test-takers are asked to respond on a Likert type scale to statements which pertain to general outlook on life and include items related to subjective experiences, past and present behaviors, attitudes and feelings. The normative group for the IOT is $N = 300$ which consists of 111 male and 189 females aged from 18 to 74 years of age (Worth, et al., 1993, p. 14) from urban and rural populations in Alberta.

Validity of the IOT. Content validity for the IOT has been established by adherence to current codependency literature in test item generation and by acceptance of only those items that were acceptable to three competent judges (Sim, 1991, p. 32). Item-total correlation analysis and item-response frequency analysis supported this conclusion (Sim, 1991; Worth, 1992). The IOT Total score is able to discriminate between individuals with a high degree of codependent orientation and others with a low degree of codependent orientation (Alexander, 1992; Sim, 1991; Worth, 1992; Worth et al., 1993).

Factor analysis was utilized to address the construct validity of the IOT. Factorial studies extracted five factors which correspond to five main characteristics of codependency (Alexander, 1992, $N = 275$; Vervoort, Korabik & Bellerby, 1993, $N = 266$; Worth, 1992, $N = 300$ [Alexander's 275 + 25]). The factors are designated: I. Externally Derived Sense of Self-Worth; II. Anxiety; III. Dysfunctional Family of Origin; IV. Dysfunctional Relationships and V. Dependency within Relationships (Alexander, 1992; Worth, 1992).

These three factorial studies provide some parameters for interpreting the IOT along separate scales that measure five main characteristics of codependency but there have been no validity studies conducted to support this empirically. The complexity of codependency as a construct and the variability unaccounted for by unique factors suggest that the most valid, reliable and meaningful score to use in interpreting the IOT is the Total score. This score reflects the complex symptomatology and inter-relatedness of behaviors associated with codependency as a psychological construct and is the score used in this research to examine the relationship between codependency and psychopathology. Both the IOT Total score and the five factor scores are utilized in the validation procedures for the IOT contained in this study.

Reliability of the IOT. Computed internal consistency reliability coefficients resulted in Cronbach's alphas of $r(300) = .91$ for a normative group and $r(45) = .94$ for a codependent group (Worth, 1992). These results are consistent with Sim's (1991) findings, $r = .88$ ($N = 107$) during the initial development of the IOT and Vervoort, Korabik, and Bellersby (1993) results, $r = .87$ ($N = 266$) for a sample of undergraduate psychology students. Test-retest procedures at a three to four-week interval yielded a reliability coefficient (Pearson Product Moment Correlation Coefficient) of $r(13) = .98$ and a standard error of measurement of 4.26 raw score points on the IOT Total score (Sim, 1991). The standard error of measurement (SEM) for the Total IOT score is 9.09 raw score points computed from the overall reliability estimate of $r = .91$ and a standard deviation of 30.16 ($N = 300$). These results suggest that the IOT is a reliable instrument.

Scoring of the IOT. Responses are recorded on a 5-point Likert type rating scale from "Strongly agree" to "Strongly disagree". Reverse weighting is used on 6 of the 60 items (2, 5, 12, 18, 28 and 46) to control for response set bias and are accounted for at the time of hand scoring. The numerical value of the responses are then summed to obtain the total IOT score. Increasing magnitude of total score on the IOT indicates an increasing codependent orientation. As the distribution of IOT scores in the normative group approximated a normal curve distribution, interpretation of the total IOT score is based on the conversion of the total IOT scores for the normative group ($N = 300$) to normalized T-scores ($M = 50$, $SD = 10$). Research has indicated that separate norms are not required for males and females (Worth, 1992; Worth et al., 1993).

The Basic Personality Inventory (BPI)

The BPI (Jackson, 1989) is a 12 scale, 240-item, paper and pencil, self-report personality inventory designed to measure relatively differentiated

components of psychopathology. The BPI was designed to assess a number of facets of personality and psychopathology both within a normal population and within a population of individuals experiencing psychological distress (Jackson, 1989, p. 3). The items describe activities, interests and behaviors which the respondent answers either true or false to depending on whether the statement is characteristic of their behavior. The 12 subscales, referring to dimensions of personality having broad import for intrapsychic and interpersonal functioning, are: hypochondriasis, depression, denial, interpersonal problems, alienation, persecutory ideas, anxiety, thinking disorder, impulse expression, social introversion, self depreciation and deviation (p. 6-7). Each of these 12 subscales is bipolar by scale definition which allows not only identification of personal maladjustment and psychopathology but also, by inference, areas of personal strength and normal personality functioning (p. 4).

Unlike many of the instruments designed to measure psychopathology, the BPI has separate norms for adults, normal and psychiatric, and adolescents. For the purposes of this study the normative group utilized for the BPI is the normal adult norms, $N = 1419$, comprised of 709 males and 710 females. Random sampling methods resulted in a sample that approximates the 1980 United States census data in terms of age, marital status, education and geographical area and also includes 87 males and 95 females drawn randomly from the voters records of an Ontario community (Jackson, 1989, p. 5,8). Several studies for the various normative groups for the BPI indicate that separate norms are required for males and females (Holden, Fekken, Reddon, Helmes & Jackson, 1988; Reddon, Holden & Jackson, 1983) due to sex differences in response.

Validity of the BPI. Numerous validity studies have examined the validity of the BPI with the results establishing the content, criterion and construct validity

of the instrument for different normative groups (Jackson, 1989). Multimethod factor analysis demonstrated the convergent and discriminant validity of the BPI (Jackson, 1975) with a sample of normal adults ($N = 192$).

Reliability of the BPI. Internal consistency reliabilities (K-R 20) for the scales range from .61 to .83 ($N = 379$) on normal adults (Jackson, 1989). Test-retest reliabilities at a one month interval using first year university students range from .63 to .87 ($N = 123$) (Holden, Helmes, Fekken & Jackson, 1985) and .62 to .85 ($N = 168$) on university undergraduates (Kilduff, 1979).

Scoring the BPI. Hand-scoring the BPI is accomplished using a template that allows counting in the appropriate column the number of items that a respondent has answered in a keyed direction. This total is then recorded at the bottom of the answer sheet labeled with the abbreviation of the scale. These raw scores are then converted into T-scores with a mean of 50 and a standard deviation of 10 using a profile sheet that matches the gender of the respondent.

The Symptom Checklist 90-R (SCL 90-R)

The SCL 90-R (Derogatis, 1992) is paper and pencil, 90-item, self-report symptom inventory designed to reflect psychological symptom patterns associated with 9 primary symptom patterns and 3 global indices of distress (Derogatis, Rickels & Rock, 1976; Derogatis, 1992). The items describe psychological symptoms associated with distinct aspects of psychopathologic status. Respondents are asked to respond to the items on a 5-point scale of distress (0-4) ranging from "not at all" to "extremely" based on how much the problem described has distressed them during the past seven days. The 9 primary symptom patterns are: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism. In addition 3 global indices of distress, the Global Severity Index (GSI), the Positive Symptom Distress

Index (PSDI) and the Positive Symptom Total (PST), provide an overall assessment of the respondent's psychopathologic status.

Several normative samples for the SCL 90-R are available. For the purposes of this research project, the normative group is the adult, non-patient normal group ($N = 973$) comprised of 493 males and 480 females selected from the eastern United States using stratified random sampling (Derogatis, 1992). Separate norms are provided for males and females due to sex differences in response to the SCL 90-R (p. 15).

Validity of the SCL 90-R. Convergent validity of the SCL 90-R has been established through comparison of the 9 dimensions of the SCL 90-R with the various MMPI scales (Derogatis, Rickels & Rock, 1976). Several studies (Weissman, Slobetz, Prusoff, Meritz & Howard, 1976; Weissman, Pottenger, Kleber, Ruben, Williams & Thompson, 1977; Horowitz, Krupnick, Kaltreider, Wilner, Leong & Marmer, 1981) have reflected a high degree of discriminant validity for the SCL 90-R. Derogatis and Cleary (1977) addressed the construct validity of the SCL 90-R using factor analysis. The resulting factor loadings supported the theoretical 9 dimension symptom structure of the SCL 90-R (Derogatis, 1992).

Reliability of the SCL 90-R. Internal consistency reliabilities (K-R 20) for the 9 primary symptom dimensions range from .77 to .90 ($N = 219$) on "symptomatic" adults (Derogatis, Rickels & Rock, 1976). Test-retest reliabilities at a one week interval using heterogeneous psychiatric outpatients ranged from .78 to .90 ($N = 94$) (Derogatis, 1992, p. 17).

Scoring the SCL 90-R. Scoring templates allow summing of the distress scores for each item comprising one of the 9 dimensions plus the items labeled "Additional items". Each summed distress score is divided by its respective number

of items. These raw scores are then transferred to the appropriate norm profile and converted to standard T-scores. For the purpose of this research the profile sheets used were for either male or female non-patient adults.

The grand total of the summed distress scores on all 9 dimensions and the additional items are divided by 90 to obtain the Global Severity Index (GSI). Counting the number of non-zero responses provides the Positive Symptom Total (PST). The Positive Symptom Distress Index (PSDI) is obtained by dividing the grand total of distress scores on all 9 dimensions and the additional items by the PST. These raw global scores are then transferred to the appropriate norm profile and converted to standard T-scores.

Administration Time and Conditions

The research subjects were asked to self-administer the IOT, BPI and SCL 90-R in a quiet setting where they would be undisturbed for approximately 90 minutes. Reports from some subjects indicated that actual completion time ranged from 60 minutes to 120 minutes.

Statistical Method and Procedure

Pearson Product Moment Correlations will be generated to determine the relationship between the IOT Total Score and the five factors identified for the IOT and each of the 12 subscales on the BPI and the 9 primary symptom patterns and 3 global indices of distress on the SCL 90-R. Stepwise multiple regression analysis will be used to examine the scales of the BPI and the symptom dimensions and indices of distress of the SCL 90-R as predictors of the total IOT score (Crocker & Algina, 1986). Independent t-tests will be utilized to compare scores on the BPI scales and the symptom patterns and the indices of distress on the SCL 90-R for a codependent group (Total IOT T-scores ≥ 60 ; $n = 19$) and a noncodependent group (Total IOT T-scores ≤ 40 ; $n = 17$) extracted from the total sample for this study (N

= 103). In addition, the results of these statistics will be utilized to examine the construct validity of the IOT.

Limitations

The limitations were embodied textually and in a minimal reiteration are as follows:

1. The self-report nature of the IOT, BPI and SCL 90-R means that there are social desirability pressures on respondents. Therefore generalization of the results of this study will have to be made accordingly.
2. The subjects who agree to participate in this study may have different characteristics from those who will not choose to participate in this research project. This will have to be weighed when generalizing from the results.
3. The restricted geographic area for subject selection will also impinge upon the total generalizability of the results.

CHAPTER IV

Findings and Conclusions

Introduction

To assist the reader, the research hypotheses are restated after which the findings pertaining to each hypothesis are presented. The results of the statistical analysis are delineated and conclusions about each hypothesis are stated. Results from the stepwise multiple regression analysis for the entire sample ($N = 103$) are then reported, followed by the results for the comparison of the codependent ($n = 19$) and noncodependent ($n = 17$) groups. Finally, the results for the validation of the IOT are presented. These findings are reported in a straightforward manner with an in-depth interpretation reserved for presentation in the next and final chapter. In addition, Appendix A and B present selected demographic characteristics for the sample utilized in this research project. Appendix D contains the descriptive statistics.

Hypothesis 1

It will be recalled that for this first hypothesis a positive relationship was postulated between codependency and depression, anxiety and compulsive behaviors.

Statistical Analysis

Pearson Product Moment correlations were calculated ($N = 103$) to determine the relationship between codependency, as measured by the Total Score on the IOT, and depression and anxiety, as measured by the BPI subscales and the SCL 90-R dimensions, and compulsive behaviors, as measured by the Obsessive-Compulsive dimension of the SCL 90-R. The results are presented in Table 1.

Findings

As can be seen in Table 1, the extent of the agreement between the IOT Total score and the Depression, Anxiety and Obsessive-Compulsive dimensions of the SCL 90-R and the Depression and Anxiety Scales of the BPI, indicates that there is a positive and significant relationship between codependency and depression, anxiety and compulsive behaviors.

Table 1

Correlation for IOT Total Score and Selected Scales of the BPI and SCL 90-R Primary Symptom Dimensions (N = 103)

	SCL 90-R			BPI	
	DEP	ANX	O-C	Dep	Axy
IOT Total Score	.62 p = .001	.61 p = .001	.64 p = .001	.53 p = .001	.54 p = .001

Conclusions

Hypothesis 1 is accepted. This suggests that as the degree of codependency experienced by an individual increases, there is a concomitant positive and significant increase in reported levels of depression, anxiety and compulsive behaviors.

Hypothesis 2

As previously iterated, Hypothesis 2 stated that there would be a positive relationship between codependency and self depreciation.

Statistical Analysis

Pearson Product Moment correlations were calculated (N = 103) to determine the relationship between codependency, as measured by the Total Score on the IOT, and self depreciation, as measured by the Self Depreciation BPI scale and the SCL 90-R Interpersonal Sensitivity symptom dimension.

Findings

The correlation between IOT Total Score and the Self Depreciation scale of the BPI was $r(103) = .48, p \leq .001$. Between the SCL 90-R Interpersonal Sensitivity dimension and the IOT Total score there was a correlation of $r(103) = .65, p \leq .001$.

Conclusions

Hypothesis 2 is accepted. Codependency is positively and significantly related to feelings of self-depreciation, personal inadequacy and inferiority and low self-esteem. In addition, this suggests that as the severity of codependency increases there would be a corresponding increase in self-consciousness and discomfort during interpersonal interactions.

Ancillary Findings Relative to Codependency and Psychopathology

Introduction

This research is intended to contribute to an understanding of the components of codependency by objectively determining what particular patterns of personality and/or classifications of psychopathology are associated with codependency. This will be further examined by comparing the difference in pathological presentation between a codependent and noncodependent group. Because of the exploratory nature of this project and the lack of empirical research that indicates the directionality of the relationship between codependency and psychopathology, the following research questions are stated in an open-ended, non-directional format.

Question 1

What are the different aspects of psychopathology and/or personality characteristics that best predict codependency ?

Statistical Analysis. Step-wise multiple regression ($N = 103$) was used to determine the scales on the BPI and the primary symptom dimensions and the global indices of distress on the SCL 90-R that best predicted the Total IOT score.

Findings. Tables 2, 3 and 4 present the results from the stepwise multiple regression analysis.

Table 2

Stepwise Regression Analysis of IOT Total Score as Predicted by the BPI Scales (N = 103)

Variable	R	R ²	F	p
Persecutory Ideas	.54	.29	41.43	.001
Anxiety	.67	.44	26.20	.001
Depression	.68	.47	21.33	.001
Impulse Expression	.70	.49	18.61	.001

Table 3

Stepwise Regression Analysis of IOT Total Score as Predicted by the SCL 90-R Primary Symptom Dimensions (N = 103)

Variable	R	R ²	F	p
Interpersonal Sensitivity	.65	.43	74.83	.001
Depression	.70	.49	48.83	.001
Obsessive-Compulsive	.72	.52	35.48	.001

Table 4

Stepwise Regression Analysis of IOT Total Score as Predicted by the SCL 90-R Global Indices of Distress (N = 103)

Variable	R	R ²	F	p
Positive Symptom Total	.68	.46	86.35	.001
Positive Symptom Distress Index	.71	.50	49.65	.001

Conclusions. The BPI scales that in combination are the best predictors of the IOT Total score are Persecutory Ideas, Anxiety, Depression and Impulse Expression. The IOT Total score is best predicted by the SCL 90-R primary symptom dimensions of Interpersonal Sensitivity, Depression and Obsessive

Compulsive. In addition, the global indices of distress on the SCL 90-R that best predict the IOT Total score are the Positive Symptom Total and the Positive Symptom Distress Index.

Question 2

Is there a significant difference in the mean scores of a codependent group and a noncodependent group on the BPI scales and the SCL 90-R primary symptom dimensions and global indices of distress ?

Statistical Analysis. Independent t-tests were used to compare the mean scores on the BPI scales and the primary symptom dimensions and global indices of distress on the SCL 90-R for a codependent group ($n = 19$; Total IOT T-scores ≥ 60) and a noncodependent group ($n = 17$; Total IOT T-scores ≤ 40) extracted from the total sample for this study ($N = 103$). Significance was set at $p \leq .01$.

Findings. The results of the independent t-tests are presented in Tables 5 and 6.

Table 5

Comparison of Mean Scores on the BPI Scales for Codependents (n = 19) and Noncodependents (n = 17)

BPI Scales	Variable	n	M	SD	t	df	p
	IOT Total Score						(2-tail)
Hypochondriasis	Codependents	19	56.42	10.11	3.73	34	.0007
	Noncodependents	17	45.41	7.13			
Depression	Codependents	19	64.53	15.16	5.19	34	.0001
	Noncodependents	17	44.88	3.78			
Denial	Codependents	19	42.79	9.5	- 1.80	34	.08
	Noncodependents	17	48.71	10.26			

Table 5 (continued)

Comparison of Mean Scores on the BPI Scales for Codependents (n = 19) and Noncodependents (n = 17)

BPI Scales	Variable	n	M	SD	t	df	p
	IOT Total Score						(2-tail)
Interpersonal Problems	Codependents	19	52.00	12.33	2.68	34	.0112
	Noncodependents	17	42.71	7.60			
Alienation	Codependents	19	50.53	10.21	1.32	34	.1956
	Noncodependents	17	46.71	6.51			
Persecutory Ideas	Codependents	19	60.90	10.90	5.50	34	.0001
	Noncodependents	17	43.35	7.77			
Anxiety	Codependents	19	61.79	10.00	6.18	34	.0001
	Noncodependents	17	44.18	6.50			
Thinking Disorder	Codependents	19	55.53	12.92	3.68	34	.0008
	Noncodependents	17	43.24	4.99			
Impulse Expression	Codependents	19	53.79	11.35	2.80	34	.0083
	Noncodependents	17	44.77	7.26			
Social Introversion	Codependents	19	58.63	14.56	2.43	34	.0207
	Noncodependents	17	49.35	6.36			
Self Depreciation	Codependents	19	57.90	11.82	4.57	34	.0001
	Noncodependents	17	44.12	4.03			
Deviation	Codependents	19	65.11	16.68	4.49	34	.0001
	Noncodependents	17	46.06	5.52			

Table 6

Comparison of Mean Scores on the SCL 90-R for Codependents (n = 19) and Noncodependents (n = 17)

SCL 90-R	Variable	n	M	SD	t	df	p (2-tail)																																																																																																																																
								IOT Total Score																																																																																																																															
Somatization	Codependents	19	60.32	8.79	4.09	34	.0002																																																																																																																																
	Noncodependents	17	49.41	6.97				Obsessive-Compulsive	Codependents	19	66.84	6.47	7.20	34	.0001	Noncodependents	17	50.00	7.57	Interpersonal Sensitivity	Codependents	19	69.42	8.08	7.15	34	.0001	Noncodependents	17	51.94	6.38	Depression	Codependents	19	67.90	5.05	10.01	34	.0001	Noncodependents	17	51.06	5.02	Anxiety	Codependents	19	65.32	7.90	7.69	34	.0001	Noncodependents	17	46.12	6.98	Hostility	Codependents	19	64.05	8.53	5.46	34	.0001	Noncodependents	17	49.18	7.72	Phobic Anxiety	Codependents	19	58.47	10.87	3.09	34	.0040	Noncodependents	17	48.59	7.91	Paranoid Ideation	Codependents	19	63.95	8.16	5.16	34	.0001	Noncodependents	17	49.65	8.48	Psychoticism	Codependents	19	66.37	7.21	7.01	34	.0001	Noncodependents	17	49.71	7.03	Global Severity Index	Codependents	19	68.05	8.97	6.96	34	.0001	Noncodependents	17	47.47	8.73	Positive Symptom Distress Index	Codependents	19	60.84	6.65	5.29	34	.0001	Noncodependents	17	47.24	8.75	Positive Symptom Total	Codependents	19	66.63	3.53	9.95	34	.0001
Obsessive-Compulsive	Codependents	19	66.84	6.47	7.20	34	.0001																																																																																																																																
	Noncodependents	17	50.00	7.57				Interpersonal Sensitivity	Codependents	19	69.42	8.08	7.15	34	.0001	Noncodependents	17	51.94	6.38	Depression	Codependents	19	67.90	5.05	10.01	34	.0001	Noncodependents	17	51.06	5.02	Anxiety	Codependents	19	65.32	7.90	7.69	34	.0001	Noncodependents	17	46.12	6.98	Hostility	Codependents	19	64.05	8.53	5.46	34	.0001	Noncodependents	17	49.18	7.72	Phobic Anxiety	Codependents	19	58.47	10.87	3.09	34	.0040	Noncodependents	17	48.59	7.91	Paranoid Ideation	Codependents	19	63.95	8.16	5.16	34	.0001	Noncodependents	17	49.65	8.48	Psychoticism	Codependents	19	66.37	7.21	7.01	34	.0001	Noncodependents	17	49.71	7.03	Global Severity Index	Codependents	19	68.05	8.97	6.96	34	.0001	Noncodependents	17	47.47	8.73	Positive Symptom Distress Index	Codependents	19	60.84	6.65	5.29	34	.0001	Noncodependents	17	47.24	8.75	Positive Symptom Total	Codependents	19	66.63	3.53	9.95	34	.0001	Noncodependents	17	49.59	6.47								
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Conclusions. As shown in Tables 5 and 6, the mean scores for the codependent group on all of the SCL 90-R primary symptom dimensions and the global indices of distress are significantly higher than the mean scores for the noncodependent group. On the BPI scales, with the exception of three scales (Denial, Alienation and Social Introversion), the mean scores for the codependent group are significantly higher than the mean scores for the noncodependent group. This suggests codependency is associated with a variety of psychopathological symptoms. However, it is important to note that none of the mean scores for the codependent group on either the BPI or SCL 90-R are in the clinical range, that is, none of the T scores are greater than or equal to 70. It would appear that while codependency is associated with increased psychopathologic symptomatology, it does not necessarily follow that these symptoms are at a clinical level that would result in the diagnosis of a specific condition or disorder using DSM nomenclature.

Validation of the IOT

Introduction

The preliminary content, criterion-related and construct validity of the IOT has been established through a series of quantitative studies (Andrew, 1992; Alexander, 1992; Sim, 1991; Worth, 1992; Worth et al., 1993). This research project is intended to continue the construct validation of the IOT and to also examine the validity of the underlying factor structure (Worth et al., 1993) that has been identified for the IOT.

Question 1

What is the relationship between IOT Total score and the BPI and the IOT Total score and the SCL 90-R ?

Statistical Analysis. Pearson Product Moment correlations ($N = 103$) were used to determine the relationship between IOT Total score and the BPI scales and the SCL 90-R symptom dimensions and indices.

Findings. The correlation results are presented in Tables 7 and 8. There are positive and significant correlations between IOT Total score and 11 of the 12 BPI scales and the SCL 90-R. There is a negative and significant correlation between the BPI Denial scale (Den) and IOT Total score

Table 7

Correlations between IOT Total Score and the BPI Scales (N = 103)^a

	BPI Scales											
	Hyp	Dep	Den	IPs	Aln	PId	Axy	ThD	ImE	SoI	SDp	Dev
IOT Total Score	.42	.53	-.28	.34	.25	.54	.54	.34	.40	.28	.48	.53

^a All correlations are significant at $p \leq .01$

Table 8

Correlations between IOT Total Score and the SCL 90-R (N = 103)^a

	SCL 90-R Symptom Dimensions and Distress Indices											
	SOM	O-C	INT	DEP	ANX	HOS	PHOB	PAR	PSY	GSI	PSDI	PST
IOT Total Score	.41	.64	.65	.62	.61	.49	.40	.56	.61	.67	.57	.68

^a All correlations are significant at $p \leq .01$

Conclusions. The results indicate that codependency is positively and significantly related to the BPI scales of Hypochondriasis (Hyp), Depression (Dep), Interpersonal Problems (IPs), Alienation (Aln), Persecutory Ideas (PId), Anxiety (Axy), Thinking Disorder (ThD), Impulse Expression (ImE), Social Introversion (SoI), Self Depreciation (SDp) and Deviation (Dev) and negatively and significantly related to Denial (Den). Codependency is also related positively and

significantly to the 9 primary symptom dimensions of the SCL 90-R, Somatization (SOM), Obsessive- Compulsive (O-C), Interpersonal Sensitivity (INT), Depression (DEP), Anxiety (ANX), Hostility (HOS), Phobic Anxiety (PHOB), Paranoid Ideation (PAR) and Psychoticism (PSY) and the 3 global indices of distress, Global Severity Index (GSI), Positive Symptom Distress Index (PSDI) and the Positive Symptom Total (PST). Overall, these results suggest that codependency is associated with a diverse number of pathological symptoms as well as increased levels of psychopathology. In addition, the magnitude of the calculated correlation coefficients, the highest of which is .68, provides some support for the divergent validity of the IOT.

Question 2

What is the relationship between the 5 identified factors for the IOT (Worth et al., 1993) and the BPI scales and the SCL 90-R primary symptom dimensions and indices of distress ?

Statistical Analysis. Pearson Product Moment correlations ($N = 103$) were used to determine the relationship between the IOT factors and the BPI scales and the SCL 90-R dimensions and indices.

Findings. The correlation results are presented in Tables 9, 10 and 11.

Table 9

Correlations between IOT Factors and the BPI Scales (N = 103)

BPI Scales	IOT Factors				
	Externally Derived Sense of Self Worth	Anxiety	Dysfunctional Family of Origin	Dysfunctional Relationships	Dependency within Relationships
Hyp	.37 $p = .001$.43 $p = .001$.35 $p = .001$.27 $p = .006$.24 $p = .013 \dagger$
Dep	.52 $p = .001$.50 $p = .001$.42 $p = .001$.39 $p = .001$.20 $p = .042 \dagger$
Den	-.23 $p = .019 \dagger$	-.25 $p = .011 \dagger$	-.23 $p = .020 \dagger$	-.41 $p = .001$	-.10 $p = .338 \dagger$

\dagger All correlations except those marked \dagger are significant at $p \leq .01$

Table 9 (continued)

Correlations between IOT Factors and the BPI Scales (N = 103)

BPI Scales	IOT Factors				
	Externally Derived Sense of Self Worth	Anxiety	Dysfunctional Family of Origin	Dysfunctional Relationships	Dependency within Relationships
IPs	.28 p = .004	.27 p = .005	.34 p = .001	.28 p = .004	.17 p = .091 †
AIn	.13 p = .179 †	.28 p = .005	.19 p = .050 †	.30 p = .002	.17 p = .085 †
PId	.50 p = .001	.51 p = .001	.35 p = .001	.34 p = .001	.44 p = .001
Axy	.56 p = .001	.55 p = .001	.26 p = .008	.35 p = .001	.33 p = .001
ThD	.26 p = .007	.45 p = .001	.17 p = .086 †	.21 p = .036 †	.20 p = .038 †
ImE	.27 p = .005	.38 p = .001	.35 p = .001	.43 p = .001	.20 p = .048 †
SoI	.27 p = .006	.25 p = .012 †	.36 p = .001	.18 p = .071 †	.03 p = .764 †
SDp	.48 p = .001	.40 p = .001	.39 p = .001	.44 p = .001	.20 p = .044 †
Dev	.41 p = .001	.57 p = .001	.49 p = .001	.47 p = .001	.16 p = .114 †

† All correlations except those marked † are significant at $p \leq .01$

Table 10

Correlations between IOT Factors and the SCL 90-R Primary Symptom Dimensions (N = 103)

SCL 90-R	IOT Factors				
	Externally Derived Sense of Self Worth	Anxiety	Dysfunctional Family of Origin	Dysfunctional Relationships	Dependency within Relationships
SOM	.34 p = .001	.43 p = .001	.23 p = .018 †	.31 p = .001	.29 p = .003
O-C	.55 p = .001	.64 p = .001	.40 p = .001	.45 p = .001	.43 p = .001
INT	.64 p = .001	.59 p = .001	.40 p = .001	.43 p = .001	.46 p = .001
DEP	.55 p = .001	.66 p = .001	.43 p = .001	.39 p = .001	.33 p = .001
ANX	.54 p = .001	.65 p = .001	.39 p = .001	.47 p = .001	.32 p = .001

† All correlations except those marked † are significant at $p \leq .01$

Table 10 (continued)

Correlations between IOT Factors and the SCL 90-R Primary Symptom Dimensions (N = 103)

SCL 90-R	IOT Factors				
	Externally Derived Sense of Self Worth	Anxiety	Dysfunctional Family of Origin	Dysfunctional Relationships	Dependency within Relationships
HOS	.41 p = .001	.55 p = .001	.26 p = .008	.36 p = .001	.32 p = .001
PHOB	.44 p = .001	.38 p = .001	.20 p = .041 †	.18 p = .073 †	.35 p = .001
PAR	.52 p = .001	.54 p = .001	.36 p = .001	.37 p = .001	.37 p = .001
PSY	.54 p = .001	.59 p = .001	.45 p = .001	.46 p = .001	.33 p = .001

† All correlations except those marked † are significant at $p \leq .01$

Table 11

Correlations between IOT Factors and the SCL 90-R Indices of Distress (N = 103)

SCL 90-R	IOT Factors				
	Externally Derived Sense of Self Worth	Anxiety	Dysfunctional Family of Origin	Dysfunctional Relationships	Dependency within Relationships
GSI	.56 p = .001	.68 p = .001	.42 p = .001	.49 p = .001	.44 p = .001
PSDI	.51 p = .001	.54 p = .001	.40 p = .001	.40 p = .001	.31 p = .001
PST	.57 p = .001	.70 p = .001	.42 p = .001	.53 p = .001	.44 p = .001

† All correlations except those marked † are significant at $p \leq .01$

Conclusions. As the only readily identifiable common component between all three tests is that of Anxiety, it would be expected that the highest positive and significant correlations would be between the IOT Anxiety factor and the Anxiety measures of the BPI and SCL 90-R. This was not supported by the statistical analysis. The highest positive and significant relationships are between the IOT Anxiety factor and the BPI Deviation scale and the SCL 90-R Depression symptom

dimension. The next highest positive and significant correlations are found between the IOT Anxiety factor and the Anxiety dimension of the SCL 90-R and the BPI Anxiety scale and the IOT factor labeled "Externally Derived Sense of Self Worth" followed by the BPI Anxiety scale and the IOT Anxiety factor. As the Indices of Distress on the SCL 90-R, Global Severity Index (GSI), the Positive Symptom Distress Index (PSDI) and the Positive Symptom Total (PST) each communicate in a single score the level or depth of the individual's psychopathology based on the test taker's response to all test items on the SCL 90-R, it would be expected that an increasing levels of codependency would be associated with increasing elevations on these measures. This was supported by the statistical analysis.

As none of the calculated correlation coefficients indicate a perfect positive or negative relationship between the IOT factors and the various components of either the BPI or SCL 90-R this suggests some degree of divergent validity between the IOT factors and these measures. However, the results suggests that the IOT factors need to undergo further reliability and validation procedures prior to the division of the IOT into subscales.

Summary of Results

Following is a rather straightforward presentation of the results of this research. These statements are but a synthesis of the total findings and only in the next and final chapter are interpretations of these results tendered for the reader's consideration.

1. Codependency is positively and significantly correlated with depression, anxiety and compulsive behaviors.
2. There is a positive and significant relationship between codependency and self depreciation, personal inadequacy and inferiority and low self-esteem. Also, the results suggest that as the severity of codependency increases there would be a

corresponding increase in self-consciousness and discomfort during interpersonal interactions.

3. The BPI scales that in combination are the best predictors of degree of codependent orientation (IOT Total score) are Persecutory Ideas, Anxiety, Depression and Impulse Expression. Codependency (IOT Total score) is best predicted by the SCL 90-R primary symptom dimensions of Interpersonal Sensitivity, Depression and Obsessive Compulsive. In addition, the global indices of distress on the SCL 90-R that best predict codependent orientation are the Positive Symptom Total and the Positive Symptom Distress Index.
4. Codependency is associated with increased levels of psychopathology. The mean scores for the codependent group on all of the SCL 90-R primary symptom dimensions and the global indices of distress are significantly higher than the mean scores for the noncodependent group. On the BPI scales, with the exception of three scales (Denial, Alienation and Social Introversion), the mean scores for the codependent group are significantly higher than the mean scores for the noncodependent group. However, it should be noted that while the codependent group may evidence higher mean scores than the noncodependent group on the SCL 90-R and 9 of the 12 scales of the BPI, these scores are not of clinical significance. This suggests that while increased psychopathological symptomatology is associated with codependency, codependency is not necessarily associated with clinical diagnosis using DSM nomenclature.
5. Codependency is associated with a diverse number of pathological conditions and symptoms as well as increased levels of psychopathology. It is positively and significantly related to the BPI scales of Hypochondriasis (Hyp), Depression (Dep), Interpersonal Problems (IPs), Alienation (Aln), Persecutory Ideas (PId), Anxiety (Axy), Thinking Disorder (ThD), Impulse Expression (ImE), Social

Introversion (Sol), Self Depreciation (SDp) and Deviation (Dev) and negatively and significantly related to Denial (Den). Codependency is also related positively and significantly to the 9 primary symptom dimensions of the SCL 90-R, Somatization (SOM), Obsessive- Compulsive (O-C), Interpersonal Sensitivity (INT), Depression (DEP), Anxiety (ANX), Hostility (HOS), Phobic Anxiety (PHOB), Paranoid Ideation (PAR) and Psychoticism (PSY) and the 3 global indices of distress, Global Severity Index (GSI), Positive Symptom Distress Index (PSDI) and the Positive Symptom Total (PST). In addition, the magnitude of the calculated correlation coefficients, the highest of which is .68, provides some support for the divergent validity of the IOT.

6. It was expected that the highest positive and significant correlations would be between the IOT Anxiety factor and the Anxiety measures of the BPI and SCL 90-R but this was not supported by the statistical analysis. The highest positive and significant relationships are between the IOT Anxiety factor and the BPI Deviation scale and the SCL 90-R Depression symptom dimension. The second highest positive and significant correlations are found between the IOT Anxiety factor and SCL 90-R Anxiety dimension and the BPI Anxiety scale and the Externally Derived Sense of Self Worth IOT factor. The BPI Anxiety scale and the IOT Anxiety factor have the third highest positive and significant correlation. In addition, increased scores on the five IOT factors is associated with increased levels and depths of psychopathology as indicated by the correlations between the IOT factors and the three SCL 90-R Indices of Distress. As none of the calculated correlation coefficients indicate a perfect positive or negative relationship between the IOT factors and the various components of either the

BPI or SCL 90-R this provides some preliminary evidence of the divergent validity of the five IOT factors. Further reliability and validity research is needed prior to the division of the IOT into subscales and to substantiate conclusions based on these subscales.

CHAPTER V

Discussion of Results and Limitations

Introduction

The results of the research provide much needed objective and empirical evidence to support the contention that there is a relationship between codependency and psychopathology. The results also provide additional evidence for the construct validity of the IOT. In order to provide a framework for the reader, the author first provides an overview of the psychopathological symptoms that the results of this research found to be associated with codependents when compared with noncodependents. Following this is an in-depth discussion of the results which includes the clinical implications and limitations of this research. Finally, there is a consideration of future research directions.

Psychopathological Symptoms Associated with Codependents

As with any form of pathology or dysfunction, it is important to be cognizant that the clinical presentation of codependency will vary among individuals diagnosed as codependent. While it is unlikely that any two individuals who are codependent would exhibit identical patterns and levels of psychopathological symptomatology, the characteristics in Table 12 provide a frame of reference that should assist mental health professionals to appreciate the clinical picture of the codependent client.

Discussion and Clinical Implications

Codependency and Depression

Depression, as defined and measured by the BPI Depression scale and the SCL 90-R Depression dimension, includes a broad range of the manifestations of

Table 12**Psychopathological Symptoms Associated with Codependents**

1. Inadequate or Deviant Socialization and Impulse Expression

- interpersonal problems
- resistance when faced with rules and regulations
- deficits in the ability to consider the consequences of actions
- inclined to behave irresponsibly
- can find routine tasks boring

2. Mood and Personal/Emotional Adjustment

- depression
- anxiety
- phobic anxiety
- distress arising from perceptions of bodily dysfunction
- tendency to be irritable, angry and resentful
- compulsivity

3. Cognitive Functioning

- suspiciousness and lack of trust
- tendency to be distractible, disorganized and confused
- interpersonal alienation
- some evidence of a withdrawn, schizoid life style

4. Self Perception and Sociability

- self depreciating
- low self esteem
- feelings of personal inadequacy and inferiority
- uneasiness and discomfort in interpersonal interactions

5. Critical Deviant Behaviors

- displays behavior patterns different from most people's
- admits to unusual and pathological characteristics

6. Test Taking Style

- lacks insight into feelings and causes of own behavior
 - will report positively a number of pathological symptoms
 - will tend to report considerable distress associated with symptoms that are endorsed
-

clinical depression including dysphoric mood, signs of withdrawal, feelings of despondency and hopelessness, inadequacy about self and a pessimistic future orientation. Codependency, as measured by the IOT, was found to correlate positively and significantly with the BPI and SCL 90-R measures of depression.

In a counselling or clinical setting the literature suggests that depression in the codependent would be expressed as a sense of emptiness, a lack of purpose, a failure to stay in control and be viewed by the client as evidence of self inadequacy (Arnold, 1990; Cermak, 1986a; Subby, 1987; Wilson Schaef, 1986; Zerwekh & Michaels, 1989). Also, as codependents are said to attempt to control their environment and others in order to protect themselves from conflict and to avoid abandonment (Beattie, 1987; Cermak, 1986a; Woititz, 1983), depression, if it is viewed as a loss of control, is likely to be denied by the codependent (Arnold, 1990; Cermak 1986a; Subby, 1987) and would therefore probably need to be therapeutically addressed in an indirect manner. In addition, the therapist working with clients who have a severe codependent orientation needs to be cognizant that denial of depression may be concomitant with denial of suicidal ideation and behaviors which dictates that considerable clinical judgment could be required to determine the actual severity of depression or degree of suicidality.

Codependency and Anxiety

Codependency, as measured by IOT Total score, is positively and significantly related to both the Anxiety scale of the BPI and the Anxiety dimension of the SCL 90-R. Anxiety, as defined and measured by these two instruments, includes being easily scared, fear of novelty and of the possibility of physical and interpersonal danger, feelings of apprehension, terror and dread and general signs of anxiety such as nervousness, tension and trembling.

Therapists working with codependents need to recognize that the anxiety associated with codependency can become chronic. The denial behaviors that codependents utilize can prevent them from having to acknowledge and deal with the source of the anxiety (Arnold, 1990; Potter-Efron & Potter-Efron, 1989). If anxiety surfaces, it could be misinterpreted as a sign of personal inadequacy and ultimately result in the establishment of a state of free floating anxiety (Arnold, 1990; Zerwekh & Michaels, 1989; Wilson Schaef, 1986). As the level of anxiety increases, the codependent can become confused, phobic and progressively more rigid in an effort to regain control (Cermak, 1986a; Potter-Efron & Potter-Efron, 1989).

Codependency and Compulsive Behaviors

There is a positive and significant relationship between codependency and the Obsessive-Compulsive primary symptom dimension of the SCL 90-R. According to Derogatis (1992), this dimension reflects the symptomatology associated with the DSM III-R Obsessive-Compulsive Disorder and ". . . focuses on thoughts, impulses, and actions that are experienced as unremitting and irresistible by the individual but are of an ego-alien or unwanted nature" (p. 7).

For the codependent, compulsivity appears to be a primary defense process permeated with denial (Mendenhall, 1989; Subby, 1987). The codependency literature postulates that the object or purpose of the compulsion is of secondary importance and often both change over time (Arnold, 1990; Peele & Brodsky, 1975; Wilson Schaef, 1986). Since control of the compulsion would be of primary concern for the codependent individual, it is likely that the struggle to resist the compulsion would serve to distract attention from uncomfortable and unexpressed emotions which are often unrelated to the actual compulsion (Arnold, 1990; Zerwekh & Michaels, 1989). Knowledge of this potential area of dysfunction in the

codependent could assist the therapist in the development of more effective treatment strategies.

Codependency and Self Depreciation

The Self Depreciation scale of the BPI and the Interpersonal Sensitivity dimension of the SCL 90-R are both positively and significantly related to codependency, as measured by IOT Total score. High scorers on the Self Depreciation scale exhibit degradation of the self as worthless, unpleasant and undeserving and generally express a low opinion of oneself and refusal to take credit for any accomplishment (Jackson, 1989, p. 7). The Interpersonal Sensitivity dimension of the SCL 90-R focuses on feelings of personal inadequacy and inferiority, self depreciation and uneasiness and discomfort in interpersonal interactions (Derogatis, 1992, p. 8).

These characteristics attributed to codependents have been shown to be disruptive to an individual's professional and personal functioning (Williams, Leclair & Sullivan, 1991; Hall & Wray, 1989). Knowledge of the relationship between codependency and the above mentioned characteristics could assist the therapist working with the codependent client to target issues or patterns of behavior having the most detrimental effect on the client's day to day functioning and quality of life.

Codependency as Predicted by Psychopathological Presentation

The BPI Scales as Predictors of Codependency. Severity of codependency, as measured by Total IOT score, is best predicted by a combination of the BPI scales of Persecutory Ideas, Anxiety, Depression and Impulse Expression. These predictors account for 49% of the variation in Total IOT score. As the relationship between codependency and anxiety and depression has been previously discussed,

the focus of this discussion will be on the relationship between the Persecutory Ideas and Impulse Expression scales and codependency.

For the counsellor working with the codependent client, the relationship between codependency and persecutory ideas and impulse expression highlights two key therapeutic issues. First, codependency would be associated with increasing difficulty in trusting others and the belief that certain people are hostile and trying to make life difficult and unpleasant. As trust level between a therapist and a client is a key issue in establishing an effective therapeutic alliance, the codependent client's need for control, fear of abandonment and hypervigilance characterized by extreme sensitivity to subtle shifts in the behavior and mood of the therapist (Mendenhall, 1989; Subby, 1987), will make it difficult to therapeutically engage the codependent. Consistency, predictability and sensitivity will thus be important characteristics of therapists who work with codependents.

Second, codependency appears to be associated with the inability to consider the consequences of personal actions, being inclined to behave irresponsibly and with finding routine tasks boring. These characteristics which could be attributed to the codependent client suggest that the type of therapeutic strategy employed by the therapist will be a critical therapeutic issue. The codependent client may experience some difficulty in being responsible for keeping appointments, completing agreed upon homework assignments and demonstrate a reactive, rather than proactive approach to life, due to their inability to forecast and consider the consequences of their actions. For the therapist, the codependent client could present a complex, and perhaps often frustrating, therapeutic challenge.

The SCL 90-R Dimensions as Predictors of Codependency. In combination, the Interpersonal Sensitivity, Depression and Obsessive-Compulsive primary symptom dimensions of the SCL 90-R are the best predictors of

codependency. Together, these dimensions account for 52% of the variance in IOT Total score. Knowledge of the symptomatology associated with high scorers on these dimensions and iterated in previous sections of this research, could assist therapists in organizing the symptoms associated with codependency into a frame of reference consistent with the scope of therapeutic practice.

The SCL 90-R Indices as Predictors of Codependency. Codependency is best predicted by a combination of the Positive Symptom Distress Index and the Positive Symptom Total. These indices communicate in a single score, based on overall responses to the SCL 90-R test items, the level or depth of the psychopathology of the test taker (Derogatis, 1992, p. 14). In terms of appreciating the clinical picture of the codependent client, the results suggest they would be apt to endorse a large number of pathological symptoms and to report high levels of symptomatic distress.

The Psychopathological Presentation of Codependents

The results of this research indicated that there are significant differences between codependents and noncodependents in terms of psychopathological symptoms. These were previously reported in Table 12.

In a therapeutic or clinical setting, the counsellor faced with a codependent client could be working with an individual who exhibits a diverse range of symptoms associated with a variety of psychopathologies and differing levels of pathology. One of the challenges facing the therapist will be to recognize that the clinical presentation of codependent clients will be complex and varied as it is unlikely that any two individuals would exhibit identical psychopathological symptomatology.

Of particular clinical relevance may be the three scales on which codependents and noncodependents do not differ, the Denial, Alienation and Social

Introversion scales of the BPI. The codependency literature which associates high levels of denial, dishonesty, avoidance of dealing with emotions and a tolerance for inappropriate behavior with codependents (Cermak, 1986a; Potter-Efron & Potter-Efron, 1989; Smalley & Coleman, 1987; Subby, 1987), would appear to predict that a codependent group should score higher than a noncodependent group on the Denial and Alienation scales of the BPI. This was not supported by the results of this research. This could be a function of the small group size employed in this study or the particular characteristics of those who chose to participate in this study. However, it may in fact provide some empirical evidence for discarding these behaviors/symptoms as characterizing the codependent client. Further research is required to address this area in a more definitive manner.

The results on the Social Introversion scale are somewhat more consistent with the codependency literature. Codependency is said to be associated with a tendency to be dependent upon others to provide them with their sense of identity (Beattie, 1987; Smalley & Coleman, 1987; Wilson Schaef, 1986) while at the same time with the avoidance of relationships with others in order to safeguard the integrity of self and avoid abandonment (Cermak, 1986a; Zerwekh & Michaels, 1989; Wilson Schaef, 1986). This ambivalent stance towards relationships and interaction with others, that is towards and away from, could account for the lack of significant difference between the codependent and noncodependent groups on the Social Introversion scale of the BPI. Further research is required in this area as well.

Validation of the IOT

Construct validity is concerned with the extent to which a test measures a psychological construct. Encompassed within construct validity is the divergent validity of a test - the extent to which a test can distinguish one psychological

construct from another. In this research, the question is twofold: (a) is the IOT Total score, which is purported to measure the construct of codependency, distinguishable from the psychopathological symptoms and conditions measured by the BPI and SCL 90-R and (b) are the five IOT factors, which are purported to measure specific aspects of codependency embodied within the IOT Total score, distinguishable from the scales, symptom dimensions and indices that comprise the BPI and SCL 90-R ?

The IOT Total Score

All three tests utilized in this research measure dysfunctional behaviors, conditions and symptoms that are disruptive to personal and professional functioning and therefore there should be statistical evidence of a relationship between IOT Total score and the BPI scales and the SCL 90-R primary symptom dimensions and indices of distress. The results of this research confirm the existence of such relationships. However, the magnitude of the correlation coefficients, none of which exceed .68 despite the influence of the large sample size, provides preliminary support for the divergent validity of the IOT Total score and for the independence of the construct of codependency from the constructs being measured by both the BPI or the SCL 90-R.

The Five Factors of the IOT

As previously noted, the only readily identifiable common component between all three tests used in this research is that of anxiety. While it was expected that the highest positive and significant correlations would be between the IOT Anxiety factor and the Anxiety measures of the BPI and SCL 90-R, this was not supported by the statistical analysis. The highest positive and significant relationships are between the IOT Anxiety factor and the BPI Deviation scale and the SCL 90-R Depression symptom dimension followed by the IOT Anxiety factor

and the Anxiety dimension of SCL 90-R, the BPI Anxiety scale and the Externally Derived Sense of Self Worth IOT factor and finally by the IOT Anxiety factor and the BPI Anxiety scale.

It can be seen in Table 13 that despite the difference in construct label there is a similarity in the content of the items subsumed under the IOT Anxiety factor and the SCL 90-R Depression symptom dimension and between the BPI Anxiety scale and the IOT factor labeled "Externally Derived Sense of Self Worth". This would appear to be contributing to the correlations between these measures. It is important to note that the labels for factors derived through factor analysis are basically arbitrary in nature. The factors identified for the IOT, and in reality for the BPI scales and SCL 90-R dimensions, are simply structures or patterns produced by covariance of measures. The factor name assigned to each of the factors represents an attempt to epitomize the essence of the factor using a logicodeductive method (Cattell & Kline, 1977; Kerlinger, 1973). As such it needs to be recognized that the present names of the five IOT factors are tentative and subject to later confirmation or disconfirmation. The results from this research suggest that future research needs to explore the possibility of alternative factor designations for the IOT factors.

The underlying reason for the magnitude of the correlation between the IOT Anxiety factor and the BPI Deviation scale is less straightforward. High scorers on the BPI Deviation scale are characterized as displaying behavior patterns different from most people's and as admitting to unusual and pathological characteristics (Jackson, 1989, p. 7). While the overall results of this research and the codependency literature would support these characteristics as being descriptive of codependency in general, further research would be required to examine the nature of the relationship between the IOT Anxiety factor and the BPI Deviation scale.

Table 13

Sample Items from the IOT, BPI and SCL 90-R

IOT Anxiety Factor	SCL 90-R Depression Dimension
13. I can't remember the last time I felt totally carefree and relaxed.	22. Feeling of being caught or trapped.
27. When things go wrong for others, I often blame myself even when I shouldn't.	26. Blaming yourself for things.
28. I don't worry very much about what the future holds for me. ^a	31. Worrying too much about things.
31. I quite often feel as if something dreadful is going to happen.	54. Feeling hopeless about the future.
43. Some days there seem to be so many things going wrong that life seems hopeless.	71. Feeling everything is an effort.
IOT Externally Derived Sense of Self Worth Factor	BPI Anxiety Scale
18. I feel I fit in at most social gatherings. ^a	31. Although I really, try, I cannot stop feeling tense.
36. I need a lot of reassurance that people like me.	43. I remain quite cool when things go badly. ^a
38. When even little things go wrong, I usually get upset and stay upset until everything is fine again.	67. Other people's actions rarely make me anxious. ^a
42. If I am embarrassed or feel foolish, I worry about it for days.	115. I generally feel quite comfortable when being introduced to strangers. ^a
46. I am never concerned about whether people like me or not. ^a	151. Little things often upset me.
56. My feelings and behavior are mostly controlled by the people around me.	175. I am sometimes disturbed by things that I know can't hurt me.

^a Items are reversed weighted for scoring purposes

The magnitude of the calculated correlation coefficients does not indicate a perfect positive or negative relationship between the IOT factors and the various components of either the BPI or SCL 90-R. While these results appear to provide

some preliminary support for the divergent validity of the IOT factors, further research is required to examine the psychometric feasibility of dividing the IOT into subscales based on the five factors presently identified.

Limitations

Several limitations suggest that caution is needed in generalizing the results of this research. The subjects were selected by nonprobability convenience sampling and from a restricted geographic area and do not reflect a fully representative sample of any specified population. As well, the subjects who agreed to participate in this study may have different characteristics from those who did not choose to participate. The three instruments used in this study were self-report measures. The results using such instruments can be affected by social desirability factors. In addition, the small sample size employed in the comparison between codependents and noncodependents also imposes limitations on generalizability.

It is also recognized that the interpretability of the results is complicated by the statistical methodology utilized in this research. As with any correlational study, the large sample size ($N = 103$) increased the chance of obtaining statistically significant correlations between codependency, as measured by the IOT, and psychopathology, as measured by both the BPI and SCL 90-R. However, the results of this research are consistent with the codependency literature. Further empirical research in the area of codependency is needed to examine the relationship between codependency and various psychopathologies.

Future Research Directions

To increase the generalizability of results, future studies might focus on the administration of the IOT and tests measuring psychopathology to a sample derived from a probability sampling methodology. If this was combined with a significantly larger sample that was also stratified on the basis of the demographic characteristics

that matched Canadian Census data, it would provide additional parameters for generalizing the results. In addition, this could increase the group size of both a codependent and noncodependent group to a large enough number to be able to conduct confirmatory factor analysis of the IOT in order to provide evidence of the stability of the present factor structure.

Concurrent administration of the IOT and tests of locus of control, self-esteem, anxiety and relationship functionality could provide further evidence for the factors underlying the IOT or may suggest alternative designations. Also, administration of the IOT and measures of psychopathology, such as the Minnesota Multiphasic Personality Inventory-2 or the Millon-III, to a psychiatric group could examine whether there are any typical psychopathological code-types associated with codependency.

Finally, as dysfunctional family of origin issues is one of the predominant characteristics of codependency but one that is not limited to the chemical dependency population, future research might investigate other dysfunctional family systems thought to generate conditions conducive to the development of codependency, such as chronic family illness, family violence and physical and sexual abuse (Beattie, 1987; Friel, 1985; Subby, 1987). Interventions and treatment strategies could then be modified to meet individual needs or be applied preventatively.

Conclusion

This research has shown that there is an empirical basis for concluding that there is a relationship between codependency and a variety of forms of psychopathology and has provided further support for the construct validity of the IOT. While work remains to be done, the IOT appears to be a sophisticated and useful measure of codependency in both clinical and research domains.

Codependency, as measured and defined by the IOT, is a legitimate and definable diagnostic entity and psychological construct. From a therapeutic and clinical perspective, this may be the proverbial "good news/bad news/who knows" scenario. The codependent client appears to be likely to manifest a variety of pathological symptoms. That is the "bad news". Codependency, as defined and measured in this study, is not an endogenous personality characteristic or trait; rather it is a pattern of being and behaving learned in a dysfunctional family system and what is learned can be unlearned. That is the "good news". It remains for future empirical research to confirm or refute the findings and conclusions of this study. That is the "who knows" portion of the scenario.

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APPENDIX A

**Demographic Characteristics of the Entire Sample (N = 103) and the
Codependent (n = 19) and Noncodependent Groups (n = 17)**

	<u>N = 103</u>	<u>Codependents (n = 19)</u>	<u>Noncodependents (n = 17)</u>
Gender			
Female	50	12	7
Male	53	7	10
Age			
≤ 20	3	1	-
21 - 30	28	5	4
31 - 40	34	6	5
41 - 50	18	4	5
51 - 60	9	1	1
61 +	11	2	2
Marital Status			
Single	43	9	7
Married	48	8	9
Widowed	1	-	-
Separated	2	-	1
Divorced	5	1	-
Common-in-law	4	1	-

APPENDIX B

Demographic Characteristics of the Entire Sample (N = 103) and the Codependent (n = 19) and Noncodependent Groups (n = 17)				
Occupational Classification and Socioeconomic Index				
CCDO^a	SES^b	N = 103	Codependents (n = 19)	Noncodependents (n = 17)
1130 General Manager	71.62	1		
1133 Admin. in Teaching	78.34	2		1
2315 Psychologist	65.36	2		1
2331 Social Worker	60.11	2	1	
2391 Educ. Counsellor	67.61	3		
2511 Ministers	52.84	2		1
2513 Nun	42.17	3	1	
2711 University Teacher	75.87	2		
2731 Elementary Teacher	63.64	2		
2791 College Teacher	66.03	3	1	
3111 Physician	101.32	1		
3113 Dentist	101.74	1		1
3131 Nurse (RN)	55.26	2	1	1
3134 Nursing Assistant	46.51	3	1	
3137 Physiotherapist	56.56	2		
3169 Occ. in Health Care	39.86	5		2
3311 Painter/Artist	36.88	2	1	
3373 Athlete	40.36	1		1
4111 Secretary	41.82	5	1	1
4113 Typist	38.47	2		
4133 Cashier	28.31	2		1
4153 Shipping Clerk	34.11	2	1	
4171 Receptionist	35.04	3		1
4193 Travel Clerk	44.92	2	1	
5135 Sales Clerk	30.93	4	1	1
5145 Service Station Att.	21.47	1		
5172 Real Estate Sales	49.99	1		
6115 Security Occ.	31.95	4	1	
6117 Armed Forces	41.69	1		
6123 Bartender	29.24	1		1
6121 Chef	25.56	1		
6147 Childcare Occ.	23.70	6	1	
6191 Janitor	26.36	1		
7113 Livestock Farmer	29.59	2	1	
7115 Crop Farmer	31.32	1		
8213 Baker	30.55	1		1
8335 Welder	41.42	2	1	
8581 Mechanic	39.19	2		
9175 Truck Driver	34.45	2	1	
9919 Other Occ.	34.90	6	2	1
9923 Labourers-Trade	23.41	4	1	
9924 Labourers-Service	21.26	4		1
9926 Labourers-Other	24.11	4	1	1

^a Canadian Classification and Dictionary of Occupations (CCDO) (1987)

^b SES - Index of combined education and income (Blisshen, Carroll, & Moore, 1987)

APPENDIX C

The Debriefing Process

Of the 107 participant packages distributed during this research project, 103 were completed and returned. Of the 103 participants, 95 waived anonymity to the researcher and requested debriefing. Participants were contacted by telephone and a mutually convenient time and location were agreed upon. Each debriefing took about 60 minutes and involved a discussion of the profile obtained by the participant when they were compared to the appropriate normative group for the BPI, IOT and SCL 90-R.

As this study involved measures of psychopathology, participants scoring in the clinical range on the test instruments were noted. Fortunately, all participants who scored in the clinical range requested debriefings on their own. After determining that they did not represent a threat to themselves or to others, the researcher provided counselling/therapy referrals for these individuals.

From the debriefings conducted, it would appear that the participants in this process viewed the debriefing as a way to increase their understanding of themselves. They appeared to approach the debriefing in a positive and constructive manner and seemed interested in identifying both areas of strength and weakness. This was facilitated by the bipolar nature of the BPI scales which by scale definition allowed not only identification of personal maladjustment and psychopathology but also areas of personal strength and normal personality functioning.

APPENDIX D

Descriptive Statistics (N = 103) for the IOT, BPI and SCL 90-R

	M	SD
IOT		
Total Score	50.38	9.54
Externally Derived Sense of Self-Worth (A)	50.25	8.45
Anxiety (B)	49.29	8.66
Dysfunctional Family of Origin (C)	52.48	9.13
Dysfunctional Relationships (D)	50.96	8.23
Dependency Within Relationships (E)	47.50	7.72
BPI		
Hypochondriasis (Hyp)	50.01	9.74
Depression (Dep)	52.04	12.39
Denial (Den)	46.40	9.20
Interpersonal Problems (IPs)	47.63	9.52
Alienation (Aln)	48.95	8.56
Persecutory Ideas (PId)	50.28	10.38
Anxiety (Axy)	50.41	10.44
Thinking Disorder (ThD)	47.63	9.15
Impulse Expression (ImE)	50.58	11.96
Social Introversion (SoI)	51.55	10.35
Self Depreciation (SDp)	49.87	9.49
Deviation (Dev)	54.22	13.39
SCL 90-R		
Somatization (SOM)	54.72	9.27
Obsessive-Compulsive (O-C)	58.45	9.53
Interpersonal Sensitivity (INT)	58.85	10.12
Depression (DEP)	58.59	9.03
Anxiety (ANX)	54.25	10.69
Hostility (HOS)	55.47	9.79
Phobic Anxiety (PHOB)	51.24	8.94
Paranoid Ideation (PAR)	55.49	9.70
Psychoticism (PSY)	56.93	9.61
Global Severity Index (GSI)	58.03	10.75
Positive Symptom Distress Index (PSDI)	53.13	8.70
Positive Symptom Total (PST)	57.75	8.79