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DEVELOPMENTAL THEORY AND THERAPY: A PRELIMINARY INVESTIGATION OF RELIABILITY AND PREDICTIVE VALIDITY USING AN INPATIENT DEPRESSIVE POPULATION SAMPLE

A Dissertation Presented

by

SANDRA A. RIGAZIO-DIGILIO

Submitted to the Graduate School of the University of Massachusetts in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

February 1989

Education

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DEVELOPMENTAL THEORY AND THERAPY: A PRELIMINARY INVESTIGATION OF RELIABILITY AND PREDICTIVE VALIDITY USING AN INPATIENT DEPRESSIVE POPULATION SAMPLE

A Dissertation Presented

by

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Education |

THIS WORK IS DEDICATED TO

ANTHONY, my consistent encourager, ELIZABETH C. RIGAZIO, my mother and my friend,

AND TO

The Loving Memories of

CHARLES F. RIGAZIO, my father and model,
NAZZARENO CERAVOLO, AND ANTONIO & ANGELA RIGAZIO

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This dissertation evolved due to the combined efforts, support, and contribution of many people. My deepest appreciation goes to each of them.

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and gentle guidance, directed me through this endeavor. His

dedication to this project was evident in the many hours he

offered and the multi-faceted roles he played throughout.

It is difficult to adequately express the profound respect

and admiration I hold for this man and for the many works he

has provided to the psychological community.

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All the patients that participated in this study also deserve recognition for their time and receptivity. Without them, this study would not have been possible.

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ABSTRACT

DEVELOPMENTAL THEORY AND THERAPY:
A PRELIMINARY INVESTIGATION OF RELIABILITY AND PREDICTIVE
VALIDITY USING AN INPATIENT DEPRESSIVE POPULATION SAMPLE

FEBRUARY, 1989

SANDRA A. RIGAZIO-DIGILIO, B.S., UNIVERSITY OF MASSACHUSETTS

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This study investigated the reliability of the cognitive-developmental classifications derived from Ivey's Developmental Theory and the predictive validity of the intervention strategies designed in accordance with this therapeutic model. Further, the cognitive-developmental styles of long- and short-term depressives were also examined.

Reliability and predictive validity were addressed by researching the following questions: (1) Can the cognitive-developmental level of patients be assessed reliably?

(2) If a clinician asks a specific set of questions aimed at eliciting patient verbalizations at varying cognitive-developmental levels, do patients respond at the predicted levels? The data gathered were also analyzed to examine whether the two subgroups of depressed patients differed in their cognitive styles. Specifically, the questions researched were: (1) Do long- and short-term depressives differ in predominant cognitive-developmental style during

the assessment phase of an interview? (2) Do short-term depressives respond more predominantly to intervention strategies designed to elicit movement through the eight cognitive-developmental levels espoused by Ivey?

Theory and research from the major models of depression etiology and treatment were reviewed and integrated with the Developmental Therapy model. This review indicated that the concepts of the cognitive-developmental model are most compatible with cognitive models of depression and offer the potential of being useful tools in the treatment of these disorders.

The sample population consisted of twenty, consecutively admitted, consenting inpatients with diagnoses of mood disorders or adjustment disorders with associated depressed features.

Each patient was administered the Beck Depression

Inventory, completed demographic data, and participated in a structured interview, the Standard Cognitive-Developmental Interview (SCDI), which is based on Ivey's model. Interview results, as categorized by the companion Cognitive Developmental Classification System (SCDCS), were analyzed using the Pearson product-moment coefficient for reliability, percentages for predictive validity, and t-tests of significance for differences between subgroups.

The resulting data indicated that Ivey's model, as operationalized through the SCDI and the SCDCS, does possess strong reliability and predictive validity. The differences

in cognitive styles between long- and short-term depressives were, however, not found to be significant. Implications and suggestions for future research and therapeutic utilization were discussed.

TABLE OF CONTENTS

		Page
ACKNOWLE	EDGEMENTS	v
ABSTRACT		vii
LIST OF	TABLES	xiv
LIST OF	FIGURES	xv
Chapter		
I.	RATIONALE AND DESCRIPTION OF THE STUDY	1
	Introduction	1 3 6
	The Nature of Developmental Therapy: A Brief Overview	6 14
	Purpose of Study	16 18 19
II.	THEORETICAL AND EMPIRICAL FOUNDATIONS	22
	Introduction	22 23
	Current Classification of Depression: Controversial Typologies Diagnostic Signs and Symptoms	. 23 . 26
	Affective Feeling State	. 27
	The DSM-III(R) Classification System	. 28
	Mood Disorders	. 28
	Mood Syndrome	. 29

Adjustment Disorders	31
Summary of the National Depression Survey	32
of Depression	33 34
Negative Cognitive Set	34 37 38 39
Depression as a Developmental Process	41
Developmental Therapy	42
Assessing the Patient's Predominant Cognitive-Developmental Level Moving Patients to New Cognitive Developmental Levels	44
Integration of Cognitive Models of Depression and Developmental Theory	48
Part II	51
Empirical Studies of Depression	51
Cognitive Process in Depression .	52
Implications of These Studies	59
Etiology of Depression	60
Implications of These Studies	63
Cognitive Treatment of Depression	65
Implications of These Studies	68
Research Studies on Developmental Therapy and Depression	69
Implications of These Studies	73
Chapter Summary	74

III.	RESEARCH METHODOLOGY	77
	Introduction	77 78 80 86 88
	The Beck Depression Inventory	88 89 89 89
	Introduction to the SCDI Design and Purpose of the SCDI Administration of the SCDI	90 90 91 92
	The Standard Cognitive-Developmental Classification System	93
	Introduction to the SCDCS Design and Purpose of the SCDCS . Rating Procedures for the SCDCS	93 93 94 96
	Research Design and Data Collection Statistical Analysis	97 102
IV.	RESULTS AND DISCUSSION	108
	Introduction	108 109
	Hypothesis 1: Results	109 112 114 116 118 121 123 123 125 126
	Discussion	128 138 141 143

v •	DEAFT	MEASU	NTAL URIN	THE G CC	IRAI IGN1	2Υ ΓጥΤ	ANI Ve	D	EP	RES	SS:	IVE	EI)I	SO	RD:	ER	S:	
		PATI	ENT 1	NATU	JRAI	LL	ANC	AUS	GE	ГЭ	11)An	יטכ	zΗ					1.46
	Intro	duct:	ion	• •	•	• •	•	•	•	•	•	•	•	•					146
	Metho	d.	• •	• •	•	• •	•	•	•	•	•	•	•	•	•	•	•		149
		Subi	ects																1.40
		Subje	edur	es			•	•	•	•	•	•	•	•	•	•	•	•	149
			The	Sta	anda	ard	C	ogr	nit	iv	e -	De	ve	10	pm	en	ta	1	
			W L	TI	ite:	rvı	ew	•	•	•	•	•	•	•	•	•	•	•	150 153
			mho	eria	3 T	TO	De .	Ra	ite	d	•	•	•	•	•	•	•	•	153
			The	Sta	and	aro		ogr	וונ	17	e -	De	ve	10	pm	en	ta	1	
			Pa+	250	Las	SII	10	d C I	LON	1 5	ys	te	m	•	•	•	•	٠	154
			Nac	GIS	•	• •	•	•	•	•	•	•	•	•	•	•	•	٠	155
		Anal	ysis	and	d P	res	en	tai	tic	n	of	D	at	a	•				155
	D 1																		
	Resul	Lts	• •	• •	•	• •	•	•	•	•	•	•	•	•	•	•	•	•	155
		Reli	abil	itv	In	for	ma	tio	on										156
		Pred	icti	ve	Val	idi	tv	Iı	nfo	orm	iat	io	n			·			158
		Shor	t- a	nd	Lon	q - t	ter	m 1	Der	ore	255	siv	'e	•	Ť	Ť	Ť	Ů	
			Con	par	iso	ns	•	•	•	•	•	•	•	•	•	•	•	•	159
	Disci	ıssio	n.																160
	Discu Limit	tatio	ns	•	·	•		•	•	•	•	•	•	•	•	•	•	•	163
	Conc																		
APPENDICE	s	• •	• •	• •	•	•	• •	•	•	•	٠	•	•	•	•	•	•	•	166
Α.	FOUR	STAG	SES C	OF D	EVE	LO	PME	NT	:	TH	HE	RI	ELZ	TA	10	NS	ΗI	P	
		OF A	DULI	r An	D C	HI	LD	PA	TT	ERI	NS	•	•	•	•	•	•	•	167
в.	DEVE																		
c.	DEVE	LOPME	ENTAI	TH	ERA	APY	:	SU	MM	AR:	Y (OF							
		TECH	JOINE	JES	•	•			•			•	•		•	•	•		174
D.	THE	CTANT	MARD	-COG	NIT	アナソ	F I	EV	EI.	OPI	MF	NT	ΛI_{\perp}						
		INTE	ERVI	ew .		•					•				•	•			. 180
E.	THE	C T A NT	מאמו	-CO c	NT.	עדיו	F I) F.V	4246	OP	MĿ	NTA	AL						
		CLAS	SSIF	ICAT	101'	1 S	YSI	CEM			•	•	•	•	•	•	•		. 189
F.	DIAG	NOSTI		RITUE	RIII	A/D	SM-	• I I	. I -	(R)	F.O.	RM		•	•	•	•	. 19/
G	PATT	ENT 1	DEN	rifi	CAT	CIO	N S	SHE	ET	•			•						. 200
Ħ	FAMT	T.Y TN	VEORI	ITAM	ON	SH	EE	ľ		•		•	•	•	•		•		. 202
Τ.	CONS	ENT T	ro P	ARTI	CII	PAT	E	FOF	M	•	•	•	•	•	•	•	•		. 20
3.	STAN	DARD	HUM	AN S	UB	JEC	TS	PF	00	:ED	UR	ES	•		•	•	•		. 21(
K.	LETT	ER OF	F AP	PROV	7AL	FR	MO	BF	RIS	TO	L	НО	SP	ΙΊ	AL				. 21
BIBLIOGRA																			
BIBLIOGRA	PHY.				•	•	•		•	•	•	•	•	•	•	•	•	•	

LIST OF TABLES

3.1	Demographic Characteristics of Sample Population	<u>Page</u> . 83
3.2	Diagnostic Characteristics of Sample Population	. 85
4.1	Hypothesis One: Holistic Rating Analyses .	. 110
4.2	Hypothesis One: Statement by Statement Rating Analyses	. 111
4.3	Hypothesis One: Numerical Rating Analyses .	. 111
4.4	Hypothesis Two: Treatment Phase Analyses of Co-raters	. 114
4.5	Hypothesis Two: Treatment Phase Analyses of Diagnostic Categories	. 115
4.6	Hypothesis Two: Treatment Phase Analysis of Cognitive-Developmental Categories	
4.7	Hypothesis Three: Cognitive-Developmental Category and Overall Hit Rate Analyses-Non-negotiated Scores	
4.8	Hypothesis Three: Cognitive Developmental Category and Overall Hit Rate Analyses-Negotiated Scores	- . 120
4.9	Hypothesis Four: Assessment Phase Analysis by Diagnostic Groups	. 124
4.10	Hypothesis Five: Holistic Treatment Phase Analysis by Diagnostic Groups	. 127

LIST OF FIGURES

	<u>Page</u>
1.1	A spherical model of development
1.2	Four therapeutic environmental styles and their relationship to Developmental Therapy
1.3	Information processing as a person-environment transaction

CHAPTER I

RATIONALE AND DESCRIPTION OF THE STUDY

Introduction

There are almost as many approaches to the counseling process as there are counselors and therapists.

--Allen E. Ivey, 1980

Thirteen years ago, the National Institute of Mental Health reported over 130 approaches to therapy within the field of counseling psychology (NIMH, 1975). Making sense of this proliferation of theoretical orientations and therapeutic techniques is a critical issue among contemporary clinicians. One response to the challenge has been a trend toward eclecticism, demonstrated in a number of surveys conducted between 1961 and 1986 (Barbeck & Weifel, 1985; Gorfield & Kurtz, 1974, 1976,1977; Kelly, 1961; Norcorss & Prochaska, 1983; Smith, 1982; Watkins, Lopez, Campbell, & Himmel, 1986).

This shift toward eclecticism provides clinicians with a virtually endless supply of theories and therapies from which to draw upon. However, if handled unsystematically, it also carries with it the potential for undisciplined therapy (Liddle, 1984; Patterson, 1985; Prochaska &

Norcross, 1983; Rohrbaugh, 1984; Smith, 1982; Ward, 1983).

This dilemma has been recognized by members of the counseling psychology profession. In the last decade, proposals have been presented to address this issue, each offering an organized framework for systemic integration. (Anderson, 1982, 1983; Avis, 1987; Beutler, 1983; Brammer & Shostrom, 1977; Bruce, 1984; Celotta & Telasi-Golubcow, 1982; Ellis, 1986; Ewing, 1977; Feldman, 1982, 1985; Frey & Raming, 1979; Friedman, 1981; Gabbard, Howard, & Dunfee, 1986; Garfield, 1980; Gurman, 1981; Hart, 1983; Hershenson, 1982; Howard, Nance & Myers, 1986; Hutchins, 1979, 1982; Ivey, 1986; L'Abate, 1981; Lazarus, 1976; Kirkpatrick, 1979; Kirschner & Kirschner, 1986; Lazarus, 1976; Moultrop, 1981; Patterson, 1985; Ponzo, 1976; Prochaska, 1979). However, because such efforts are new to the field, the emerging metatheories have not, as of yet, reached a mature level of theoretical coherence and therapeutic applicability. Prochaska and Norcross (1983) note that the next "challenge for synthetic eclectic therapists and theorists alike is to construct models of systematic eclecticism that have both empirical validity and clinical utility" (p. 168). This statement sets the stage for the next phase of metatheory coconstruction. The Developmental Therapy approach of Allen Ivey (1986) is one example of a metatheory that is currently making the transition to this phase, as it begins to develop the scientific rigor and therapeutic guidelines required of a mature theoretical foundation. This study sought to

provide preliminary empirical data to assist in the transition of Developmental Therapy to formal status.

Statement of the Problem

At this point in the development of counseling psychology, advancement as a discipline is, in part, contingent upon the development of rigorously constructed metatheories that address the converging and diverging themes now recognized and that define rules of therapy and scientific inquiry. In Developmental Therapy: Theory into Practice, Ivey (1986) offers such a metatheoretical integrative approach with firm inroads to clinical practice and empirical investigation. Basically, Ivey integrates Platonic philosophy with neo-Piagetian psychology and defines the connection in behavioral terms that can be applied to the therapeutic process. The result is a dialectic meta-developmental orientation that focuses on assessing a patient's cognitive-developmental level, providing a therapeutic approach that matches the patient's needs, and shifting the therapeutic approach as the patient grows and develops in the dialectic process of the therapeutic relationship.

There has been an accumulation of "soft" evidence (i.e., informal observations, pilot examinations, and informal testing) that supports the validity of this model as an alternative theory and therapy and as an integrative metatheory. The amount of data generated suggests that

Developmental Therapy is ready to embark on a transition to formal status: A transition Ivey believes will occur over the next decade as the model is practiced, researched, and sophisticated. Critical to this transition is the empirical investigation of the central explanatory construct and underlying premise upon which Developmental Therapy is based. Introducing this critical data was the primary concern of this research.

First, this project sought to determine if it is

possible to identify a patient's cognitive-developmental

frame of reference by rating her or his verbal interview

behavior using a classification system developed for this

purpose. Second, this project sought to determine if it is

possible to use specific listening and questioning

strategies to facilitate patient movement through the

different cognitive-developmental frames of reference.

A criticism of theoretical research in the field of counseling psychology has been its over reliance on college-level samples to validate hypotheses then made generalizable to clinic populations (Coyne & Gotlib, 1983). A similar criticism is made in relation to counseling theory and therapy in that both are geared toward a predominant client profile identified as highly verbal, well-educated and financially secure. The true integration of theory, clinical practice, and empirical investigation requires that a wider range of population types be addressed in all three

arenas in order to acknowledge the diversity of individuals who receive treatment.

Toward this end, it was the intention of this study to demonstrate that Developmental Therapy can be validated with a depressed sample population which comes from a community identified as low to middle income and less educated. The precise examination of this study focused on whether or not long-term depressives differ in cognitive-developmental style from short-term depressives.

Specifically, the target population of depressive disorders was chosen as a suitable proving ground for four major reasons:

- 1. There are a variety of cognitive models that describe the etiology and treatment of depression that are compatible with Ivey's cognitive-developmental framework. (This will be more fully addressed in Chapter II.)
- 2. There is confusion in the field regarding the precise role of cognition in the developmental process of depression. Ivey's Developmental Therapy may potentially provide a more precise cognitive-developmental map of this process; a unique view of the personal meanings that depressives develop concerning themselves and their world, and an idea of how these meanings are affected by this model of therapy.
- 3. This is clearly a psychiatric population and therefore addresses the major research and treatment criticism concerning sample and treatment populations.
- 4. This population is also known not to produce a great deal of cognitive statements. Evidence of their ability to respond to this model will have positive implications for the treatment of more verbal patients.

Background

The nature of Developmental Therapy and of its relation to depressive disorders will be briefly described. More detailed descriptions of the model, the disorder, and the potential relationship between the two will be provided in the next chapter.

The Nature of Developmental Therapy: A Brief Overview Developmental Therapy (Ivey, 1986) represents an integrative model of cognitive-developmental practice recursively connected to a theoretical foundation derived from a modern adaptation of Piagetian psychology and Platonic philosophy. It is a systematic framework that is meant to be broad enough to serve as a metatheoretical/integrative approach to treatment and specific enough to serve as a treatment model in its own right. Developmental Therapy: Theory into Practice (Ivey, 1986) offers a revitalized focus on development as a unifying force, and provides organizing guidelines to interconnect theory, therapy, and research.

The theoretical foundation of Ivey's model expands on the traditional view of development as a linear progression through stages. It represents a dialectic, holistic, orientation to development that evolved from a unique synthesis of linear hierarchial, cyclical, and spiraling models (see Figure 1.1). Central to this is a view of human development as a constant movement through levels of

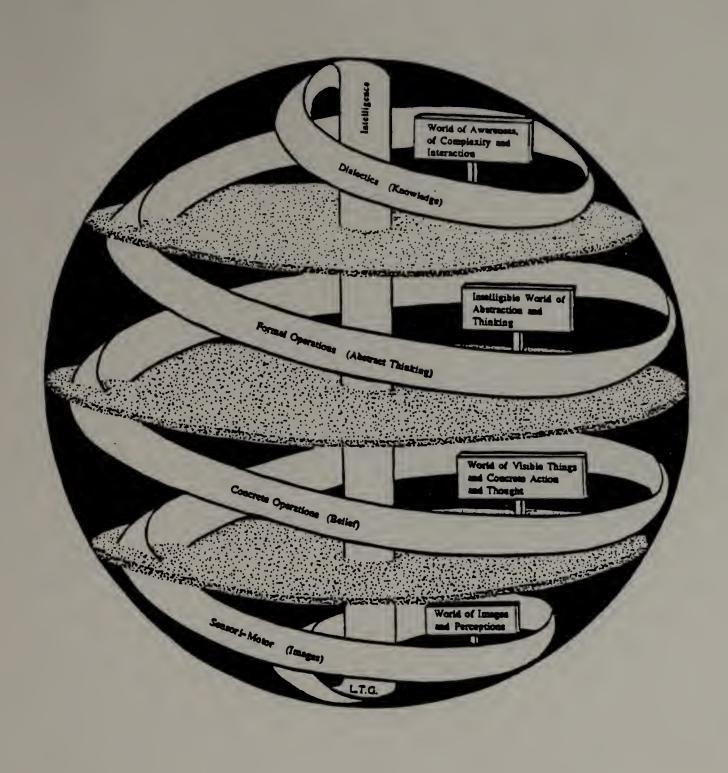


Figure 1.1. A spherical model of development

cognitive-development analogues to Piagetian sensori-motor, preoperational, concrete operational, and formal operational thinking (see Appendix A).

The therapeutic framework combines three conceptual models into a highly specific, action oriented therapy that is recursively connected to the theoretical foundation and to specific dimensions of information-processing theory.

The first, an <u>organizational model</u> offers two frames for identifying the various cognitive-developmental levels. First, it provides a general structure from which to access a patient's predominant level of functioning in relation to specific concentrations (see Appendix A) and, second, it provides a method to measure a patient's movement throughout the therapeutic process (see Appendix B).

The second, a treatment model, defines two developmental frames from which the clinician can both create a suitable therapeutic environment and plan a set of developmentally appropriate interventions to assist with patient growth over time. One frame offers four therapeutic styles designed to match a patient's cognitive-developmental level of functioning at any given time (see Figure 1.2). The other outlines a nine-step approach for facilitating cognitive-development and shows how to integrate various therapeutic theories, therapies, and strategies into the approach (see Appendix C). Both frames can be used together as part of a therapeutic modality and can also be used in conjunction with widely diverse therapies. The

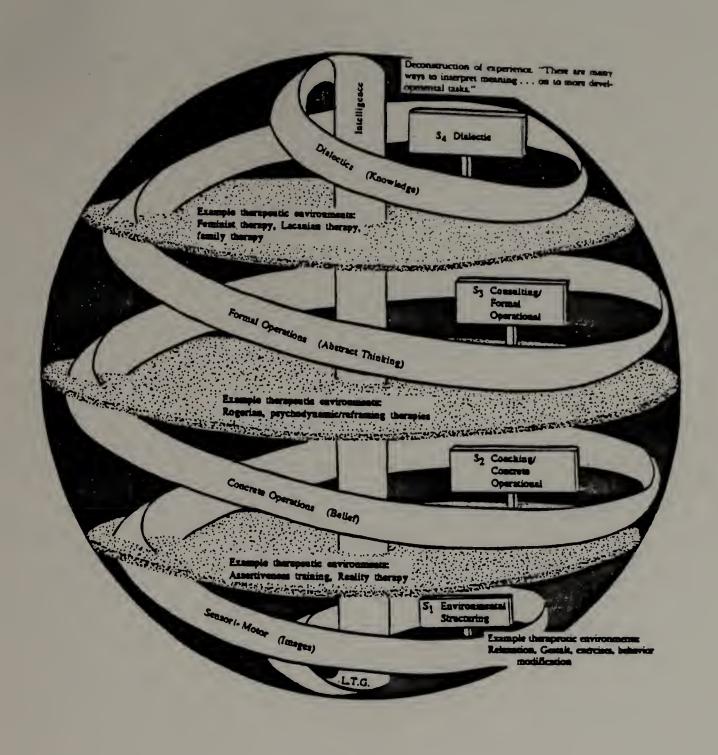


Figure 1.2. Four therapeutic environmental styles and their relationship to Developmental Therapy (continued)

Further illustrations of the four fundamental environmental styles:

Style 1. Environmental Structuring. The therapeutic environment is warm, structured, and relatively directive. Bioenergetics, relaxation training, Reichian-based therapies that focus on the body are examples. Structured behavioral approaches for in-hospital psychiatric treatment are also examples of this style. The behavior of the therapist often focuses on telling the client what to do. Influencing skills are used to a high degree.

This level is developmentally appropriate for clients with problems in sensori-motor functioning or to ground clients in sensory-based data. A client may come in blaming the parent. The therapist seeks to obtain sensory data and the facts about the preoperational conceptual problem. Transformation involves the concretizing of preoperational thought.

Style 2. Coaching/Concrete Operational. The therapeutic environment seeks to provide considerable structure for individual development, but the client participates more in the generation of ideas and structures. Examples of therapies include assertiveness training, reality therapy, decisional counseling. There is a balance of listening and interpersonal influence skills.

This level is developmentally appropriate for individuals who have difficulty in concretely impacting their environment. For example, weight control programs or smoking cessation programs from a decisional or behavioral point of view exemplify this approach. The goal is to move toward clearer definition of linear causality and the ability to act predictably on the environment.

Style 3: Consulting/Formal Operational. In the early stages, warmth and support are particularly important to facilitate the development of an individual self-awareness. At this stage, resistance may be particularly strong to directions and influence, and so listening skills may be most appropriate. Rogerian therapy and logotherapy are characteristic of therapies useful in the early stages of this quadrant, whereas reframing therapies such as psychodynamic or transactional analysis may be more appropriate at a later stage. At the later stages, more action on the part of the therapist again becomes appropriate. Cognitive behavior modification may join style 3 with coaching style 2 as well.

This stage is appropriate for those who are entering or working at the formal operations level. The goal is first to obtain a clear sense of self or direction but later to encourage the generation of alternative frames of reference.

Style 4: Dialectics. The dialectical approach to therapy may be characterized by an egalitarian search for truth. Depending on the theoretical orientation, there may be a fair amount of self-disclosure (feminist therapy) or very little (Lacanian). There is a tendency to discount "final" truths and a willingness to encounter new questions and developmental tasks. Contradiction may be actively sought, as opposed to the tendency in other quadrants to resolve and synthesize contradiction.

Figure 1.2. Four therapeutic environmental styles and their relationship to Developmental Therapy (Continued)

Although the nature of the dialectic may make the techniques of therapies of this orientation suitable for those of "lower" developmental levels, full participation in the dialectic of therapy will eventually require the client to reach new levels of consciousness. Common to those experiencing this level of personal search will be awareness of the tension between noesis and episteme, between permanent and elusive truth.

Dialectical deconstruction of experience occurs when awareness that "truth" as discovered in context requires a movement or shift, often involving a "return to the beginning" for a new developmental task.

"It seems wise to join the client in his or her cognitive constructions of the world and then to move with the client, shifting therapeutic style as appropriate to client needs and wishes."

Figure 1.2. Four therapeutic environmental styles and their relationship to Developmental Therapy (Continued)

treatment model is based on a belief that different change strategies offer varying degrees of utility at different cognitive-developmental levels.

The last model conceptualizes the process of change specific to Developmental Therapy. This dialectic model identifies the nature of the two-person interaction that occurs within the therapeutic arena (see Figure 1.3). This mutually recursive process facilitates a systematic and predictable sequence of transitions through cognitivedevelopment levels that is isomorphic to development. dialectic model further identifies the on-going, reciprocal interaction between assessment and intervention that provides the connecting link between the organizational model and the treatment model. The three models described are recursively connected, and this interdependence marks the trend toward a more dialectic, mutual approach to therapy focused on assessing the ever-changing needs of the client throughout the treatment process and choosing developmentally appropriate change strategies and theoretical orientations to meet these needs.

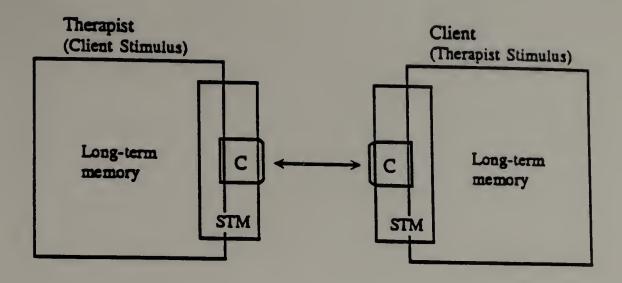


Figure 1.3. Information processing as a person-environment transaction

Developmental Therapy and Depressive Disorders:
A Brief Overview

Since the early sixties, work in the field of
Depressive Disorders has focused on a cognitive model of
illness etiology and treatment. The pioneering works of
Beck, Ellis, Bandura, Paykel, and Seligman have provided a
backdrop that indicates the role of cognitive processes in
depression. This cognitive framework posits that depression
evolves from negatively distorted beliefs that need to be
subtly and persistently challenged in the context of
cognitive therapy until the beliefs are replaced with
positive, realistic thought patterns (McNamara & Horan,
1986). In other words, the goal of treatment is to
facilitate cognitive restructuring of the patient's view of
her or himself, her or his social environment and her or his
effectiveness within the environment.

A problem with cognitive theory is the lack of reliable means for measuring a patient's level of cognitive functioning (Combs, 1980). Currently, clinicians infer cognitive-developmental level through such factors as performance changes, self-reports, and non-verbal indicators. The ambiguity created by this process has negative implications for establishing accurate diagnostic criteria and reliable instruments to measure patient progress throughout treatment.

Another recognized need in the treatment of depression is the importance of matching interventions with the

patient's cognitive-developmental level (Germain, 1984; Lane & Schwartz, 1987) Again, the imprecise nature that is characteristic of the major cognitive models of depression does not assist the clinician in developing efficacious treatment interventions that can appropriately facilitate patient movement.

Developmental Therapy, as defined by Ivey, offers the clinician a specific cognitive-developmental framework that can be used to diagnose a patient's predominant cognitive-developmental style, to intervene with a variety of questions and techniques that are designed to match patient style and to expand patient developmental cognitions, and to measure treatment progress. Ivey's model also provides researchers with highly specific methodological guidelines from which to design instruments and methods to measure the effectiveness of therapeutic interventions and the level of progress made throughout treatment.

Another area that needs to be resolved in greater detail in the field of depressive disorders is the developmental nature of a negative self-schema. Work by Davis and Unruh (1981), Krantz (1985), and Young and Grabler (1985) indicate that a qualitative difference exists between the emerging negative schema of a short-term depressive (i.e., exogenous, reactive types) and the well-established negative schema of the long-term depressive (i.e., endogenous, autonomous types). Ivey's work demonstrates a potential to provide a quantification method to this

determination process. This study provides preliminary data that can be used to later develop a quantification framework for assessing and treating depressives.

The next section will outline the purpose of this study. Following this outline, the significance of this study will be addressed.

Purpose of Study

As previously mentioned, the central purpose of this dissertation was the investigation of the reliability and predictive validity of a cognitive-developmental approach to therapy (Ivey, 1986). This has been accomplished by determining if the cognitive-developmental classifications, as operationalized by Ivey, can be predictably accessed with specific intervention strategies in a manner that allows for reliable identification of each level in a patient's language. First, the issue of reliability was addressed by determining if the cognitive-developmental levels posited by Ivey could be reliably identified in a patient's verbalizations during a standard interview. This issue was explored through two questions:

- 1. Can a patient's predominant cognitivedevelopmental level (PCDL) be classified reliably at the beginning of a standard interview? PCDL is defined as the cognitive-developmental level that stands out above all others.
- Can sets of patient statements made in response to different types of clinician questions during a standard interview be classified reliably?

The data gathered was then used to examine the issue of predictive validity, which was addressed through a third question:

3. Given that a clinician asks a patient a standard series of intervention questions oriented toward a specific level of cognitive-development, does the patient in turn offer a set of verbal statements at the same level? In effect, can we predict patient response from specific clinician interventions/questions?

Basically, the research issue related to predictive validity was to determine if it is possible to use specific questions and listening strategies adapted from Developmental Therapy to produce predictable patient responses.

This investigation also represents preliminary steps in the construction and use of instruments derived from empirical guidelines offered by Ivey. Specifically a Standard Cognitive-Developmental Interview (see Appendix D) and a companion Cognitive-Developmental Classification System (see Appendix E) were constructed to address the issues of reliability and predictive validity. (Both the Interview and the Classification System are described in Chapter III.)

Finally, the reliability and predictive validity data accumulated were examined through a comparison of interviews of two types of depressed patients. The general question was, to what extent, if any, do long-term depressives differ in cognitive-developmental style from short-term depressives.

Significance of Study

This section will briefly outline the specific implications of the study for the counseling psychology field in general, for the coevolution of Developmental Therapy, and for work with depressive disorders.

As previously stated, the counseling psychology field has experienced a dramatic shift toward eclectism in its effort to manage the increasing numbers of diverse theoretical orientations and therapeutic approaches. A scientifically rigorous, coherent framework supportive of eclectic practice is needed to ensure systematic organization. Developmental Therapy potentially offers such a metatheoretical integrative model while also offering an alternative therapeutic approach in and of itself.

The next phase in the evolution of Developmental

Therapy is a transition to formal status as a scientifically rigorous model. This study represents a crucial, preliminary step in this transition in that introduces the first verification of the model's empirical integrity and of its potential value as a scientific theory.

This study also represents preliminary steps toward the eventual development of empirically based, systematic diagnoses, intervention, and evaluation instruments derived from Developmental Therapy. It is believed that the interview and its companion classification system can generate data that support the continued clinical and empirical use, investigation, and construction of these

instruments, and that both can play an important role in advancing research and practice in Developmental Therapy.

Finally, the field of depressive disorders can benefit from the results of this study. The primary contribution that is offered is the use of the structured interview to potentially bring greater clarity and precision in establishing a patient's cognitive-developmental level at the initiation of, and throughout treatment. If investigated further, this preliminary contribution could revolutionize the classification system and subsequent preferred treatment regime for various forms of the depression syndrome.

Establishing Developmental Therapy as a scientifically grounded approach to treatment will be a long-term process and this dissertation represents only an initial step. The results reported are therefore considered to be of a preliminary nature and should be interpreted with caution. Replication and extension to other counseling domains will be required to give further credence to the supportive data derived from this study.

Outline of the Remainder of the Dissertation

The remainder of the dissertation will be divided into four chapters.

The next chapter will address the confusion in the field of depressive disorders and the unifying role that Developmental Therapy can have on the field. First, the

major cognitive models of depression will be addressed and integrated with Ivey's Developmental Therapy model. Second, empirical evidence concerning the central role of cognition in the development of depression will be described. Third, scientific work focused on the etiology and treatment of depression will be outlined. Finally, promising research central to further understanding the role of cognition in depression and central to increasing the significance of Developmental Therapy for the field of counseling psychology will be addressed.

The third chapter will outline the specific research methodology to be used in this study. The process of integrating this study with a hospital setting, the methodology for sample selection, a description if instruments selected and developed, the actual research design, the procedures for data collection, and the process of data analyzation will be addressed.

Chapter four will present the analyses and results of the study. The findings for each hypotheses will be explained. This will be followed by a unifying discussion of the meaning of the data collected as related to the counseling psychology field in general and to specific implications for work in the area of depression. This chapter will also detail the limitations specific to this work and will end with a description of the future implications of this research.

The final chapter is a recapitulation of the central thesis, methodology, and results of this research. Here the findings are summarized and integrated within the larger context of Developmental Therapy and depressive disorders. The meththodological aspects of this study are presented as viable tools with which to advance the utilization of cognitive-developmental approaches to treatment and research. Specifically, the Standard Cognitive-Developmental Interview and Classification System are offered to the counseling psychology community as diagnostic, treatment, and evaluation techniques that are in the preliminary stages of construction.

CHAPTER II

THEORETICAL AND EMPIRICAL FOUNDATIONS

Introduction

In this chapter, the confusion in the field of depressive disorders, specifically related to the etiology and treatment of depression, will be reviewed. The unifying role that Ivey's Developmental Therapy can have on the diagnosis, treatment, and empirical investigation of depression will also be presented.

This chapter is divided into two major parts. In Part I, the major cognitive models of depression will be outlined and integrated with Ivey's cognitive-developmental model. In Part II, empirical studies that provide evidence of the central role of cognition in the development of depression will be analyzed. Experimental work in the areas of the etiology and treatment of depression will then be presented. This section will conclude with a survey of research efforts that hold promise in advancing the understanding of the role of cognition in depression and the significance of Developmental Therapy for the field of counseling psychology.

Part I

Current Classification of Depression: Controversial Typologies

Although depression has been clinically recognized for over two thousand years, theorists, clinicians, and researchers have not been able to agree upon a unifying definition of the illness. The varied definitions have given rise to a multitude of theoretical models that describe the source and treatment of depression, hence significant etiological, classification and treatment ambiguities abound in the field.

Wetzel (1984) has identified five schemas that have been employed to differentiate the various forms of the illness. The first continuum is the endogenous/exogenous dichotomy. Endogenous depression is assumed to be triggered by internal factors such as heredity, constitution, metabolism, predisposed personality factors, etc. On the other hand, exogenous depression reflects a personal response to external psychogenic factors, such as psychosocial stressors, and interruptions in vocational, familial and developmental patterns. Misclassification is common as the ubiquity of environmental or personality factors may be under or over-diagnosed depending on the orientation of the clinician.

The second continuum identified by Wetzel involves patient reaction to treatment. Patients who positively respond to therapy, psychopharmacology and/or support are

categorized as reactive cases. Conversely, patients whose symptoms are immune to such therapeutic interventions are labelled as autonomous types. Again, the possibility for confounding influences affecting this classification process are quite prevalent. Not only is a clinician's effectiveness at stake, but her or his values concerning what comprises efficacious treatment conditions may also distort the perception of patient progress (Wetzel, 1984).

Depression typology in American psychiatry has evolved over the years into a binary system of psychotic and neurotic types (Levitt, Luben & Brooks, 1983). This classification system represents the third schema identified by Wetzel. Psychotic episodes are marked by a combination of depressive symptoms and a loss of contact with reality. Visual and/or auditory hallucinations and delusions are often manifest in the psychotically depressed patient.

Neurotic depression is characterized by depressive symptoms that range from mild to severe intensity without loss of contact with reality. Pitfalls of this typology are that psychotic episodes can be temporary and that what is real to a clinician may not be real to another quite reasonable but distraught person (Wetzel, 1984).

Research efforts have identified two types of depression that differ based on the history of a patient's psychiatric disorders (Weissman, Merikangas, Wickramaratne, Kidd, Prusoff, Lechman, & Pauls, 1986; Zimmerman, Coryell & Pfohl, 1986). This represents the fourth schema identified

by Wetzel. For people whose histories are void of other previous psychiatric disorders the category of primary affective disorder is used. On the other hand, patients who have had a history of other major mental or physical illnesses are classified as experiencing secondary affective disorders. While this distinction has been helpful in epidemiological studies, it has not significantly contributed to an understanding of the cause and treatment of the illness.

The final schema identified by Wetzel is a classification system based on somatogenic considerations. Emil Kraepelin developed a preliminary system in 1883 from which diagnostic decisions were formulated. He identified two major classification subdivisions: manic-depressive insanity and dementia precox. Both were further divided among acquired and morbid predisposition. His criteria later became the basis of our present classification systems. The terms bipolar and unipolar types of depression are direct results of the original Kraepelinian manicdepressive construct. The unipolar type of depression describes a patient whose mood fluctuates from normal euthymic affect to depressed moods in a recurring fashion. Bipolar type on the other-hand is characteristic of a wide range of alternating moods. Intense fluctuation from severe mania (euphoric) affect to severe depressive (dysphoric) feelings are evidence of this category. Wetzel states that confusion still exists between the two diagnoses. In fact,

epidemiological studies indicate that 68-85% of "manic-depressives" have had episodes of depression without mania (Wetzel, 1984).

In conclusion, Levitt, Lubin, and Brooks (1983) state that the sum of decades of effort to clarify this puzzling concept seems to have been an algebraic negative; the more hypotheses, conceptualizations, data, and analyses that accumulate, the more confusing the construct of depression becomes. Wetzel surmises that although these nosologies are ambiguous and full of potential inaccuracies, they can indeed be helpful tools for understanding the multifaceted nature of depressive illness.

Diagnostic Signs and Symptoms

Affective Feeling State

The core symptom of depression is sadness (Blaney, 1980). Although this may appear to be merely stating the obvious, few psychological theories have fully taken into account the affective element in depression. Deleting sadness from the list of symptoms would have little impact on existing theories. Because of denial and masking abilities people are able to conceal depressed affect and yet it is present in over 95% of patients diagnosed as depressive (Ayd, 1961). Other affective signs include feelings of guilt, hopelessness, unworthiness, unreality, fearfulness, anxiety, anger, confusion, tiredness and irritability (Ayd, 1961; Wetzel, 1984).

Cognitive Processes

Impaired cognitive functioning is highly correlated with depression. Cognitive symptoms include a negative view of the world, the self, and the future; irrational beliefs; indecisiveness; disinterestedness; confusion; memory problems; denial; poor concentration; and recurrent thoughts of death or suicide (Beck, 1967; Davis, 1982; Nezu, 1986; Rush, Wiessenburger, & Eaves, 1986; Weingartner, Cohen, Murphy, Martello, & Gerdt, 1981).

Behavioral Activity

A lack of interest in others and a lack of motivation in general are primary symptoms of depression (Blumberg & Hokanson, 1983; Coyne & Gotlib, 1983). Social withdrawal, increased dependence, and submissiveness are common attributes that have been credited to causality (Wetzel,1984). Crying, poor communication skills and careless appearance are also associated with depression. Psychomotor behavior may be retarded or agitated given the bio-social environment of the patient.

Physical Functioning

The more severe the depression, the more likely it is that physical functioning is problematic. Low energy, fatigue, indigestion, tension and disturbed bodily functions are concomitant symptoms of depression (Dobson & Jaffe,

1986). Appetite, sleep and sex-drive disturbances range along a continuum from diminished to increased.

A major conundrum in this field is the relationship between physical symptoms and depressed affect. The central question is which proceeds first. Are bio-chemical imbalances responsible for behavioral, cognitive and affective changes or are the physical anomalies really manifestations of a depressed state of being (Ayd, 1961; Beck, 1976; Cassidy, Flanagan, Spellman, & Cohen, 1957; Harrow, Colbert, Detre, & Bakeman, 1966; Mendels, 1970; Schwab, 1970)?

The DSM-III(R) Classification System

First published in 1952, the Diagnostic and Statistical Manual of Mental Disorders, has been the major, authoritative source of the psychiatric diagnostic process used in this country. Updated in 1968, again in 1980, and revised in 1986, the recent revision continues its tradition of being an atheoretical descriptive approach to the classification of mental disorders. While the DSM-III(R) nosology is comprehensive, it does not provide information concerning theories of etiology, management or treatment (Wetzel, 1984).

Mood Disorders

In DSM-III(R), depression is classified under mood disorders. Mood refers to a prolonged emotion that colors

the whole psyche life. It generally involves either depression or elation. Previously this classification was labeled as Affective Disorders in DSM-III. Mood disorders can be one of the following:

Mood Syndrome

A mood syndrome, whether depressive or manic, is a group of mood and associated symptoms that occur together for a minimally specified period of time. Mood syndromes can occur as part of a mood disorder, a non-mood psychotic disorder or an organic mental disorder.

Mood Episode

A depressive, manic or hypomanic mood episode is a mood syndrome that is not due to a known organic factor or a non-mood psychotic disorder. This was the only category of mood disorder considered in this study.

The major sub-classifications of mood disorders that encompass depression are:

Major Depressive Disorders

The essential feature of these disorders are dysphoric mood that is preeminent, persistent and associated with symptoms such as appetite disturbance, change in weight, sleep disturbance, psychomotor agitation or retardation, decreased energy, feelings of worthlessness or excessive or inappropriate guilt, attentional difficulties, and recurrent

thoughts of death, or suicidal ideation or attempts. The diagnosis can only be made if organic or other mental disorders have been ruled out. Manic episodes must also be absent in order to conform to this diagnosis. Major depression can be of a single episode or of a recurrent nature. Further specificity defines this illness into either a melancholic type or a seasonal pattern of symptom manifestation. This mood disorder sub-classification was utilized in this study.

Bipolar Disorders

This category is distinguished by whether or not an individual has ever had a manic episode. This disorder can be diagnosed even if there is not a history of major depressive episode. This classification is subdivided into three diagnostic groups. The mixed episodes are marked by a full display of symptoms classified as both manic and major depressive. The intermixed or "rapid cycling" of the two types of episodes forbode a much more chronic course for this type of disorder. The second and third classifications are manic (currently in a manic episode) or depressed (has had one or more manic episodes but is currently experiencing a major depressive episode). This mood disorder subclassification was not considered in this study.

Less Intense Mood Disorders

DSM-III(R) recognizes mood disorders that are of insufficient severity or duration to meet the criteria set for the major classifications. In cyclothymic disorder numerous periods of depression and hypomania occur but do not fall within the major diagnostic groups. Dysthymic disorder is solely used for depressive symptomology.

Two not otherwise specified categories are established in DSM-III(R). One for <u>Bipolar Disorders</u> and the other for <u>Depressive Disorders</u>. These categories are reserved for cases that manifest features of each disorder but do not meet the criteria for any specific mood disorder. This subclassification was not recognized in this study.

Adjustment Disorders

DSM-III(R) recognizes the category of adjustment disorder. The essential feature of this disorder is a maladaptive reaction to an identifiable psycho-social stressor or stressors. Symptoms of this disorder must manifest themselves within three months after the onset of the stressor and can not persist longer than six months. Inherent in this classification is the assumption that the disturbance will rebate after the stressor ceases or when a new level of adaptation is achieved. While this classification is a discrete diagnosis, many of the subtypes are partial syndromes of other specific disorders.

The sub-classifications of this category which the study was concerned with are: a) adjustment disorder with depressed mood, b) adjustment disorder with mixed disturbance of emotions and conduct (including both depressive and anxiety features accompanied with a disturbance of conduct), and c) adjustment disorder with mixed emotional features.

Levitt, Lubin, and Brooks (1983), published the results of the National Depression Survey conducted by the Opinion Research Center at Princeton University. The sample of 3011 subjects is considered an accurate representation of the non-institutionalized adult population. The findings of this survey have been analyzed to present certain conclusions about depression, at the least as a symptom if not as an illness. The findings, viewed univariately, are summarized in the following manner (pp. 198-199):

- 1. The relationship between depression and age is positive, and women tend to show more depression than men, but most of these relationships are extremely weak.
- 2. Contrary to expectation, there is a definite, negative relationship between depression and educational level.
- 3. Their findings do not support the view that married persons are more depressed than those who are unmarried.
- 4. They found no differences in depression among religious groups.

- 5. The results suggest that differences in depressive tendency between sexes and races and among geographical regions are probably due primarily to a markedly high depression tendency among black females.
- 6. Their data is consistent with earlier findings that depression is curvilinearly related to annual income.
- 7. The results also supported their hypothesis that unemployment or declining financial situation are positively related to depression.
- 8. There was a slight tendency for individuals who rent homes or apartments to be more depressed than those who own their homes.
- 9. The correlation between annual income and recent financial change indicates that the later significantly affects depression only among those of low income.
- 10. Contrary to earlier studies, a negative relationship between occupational status and depression was reported.
- 11. There was no relationship between depression and population of the area in which a subject lives.
- 12. A negative relationship between depression and social class was reported.
- 13. Finally, demographically speaking, the depression prone person is likely to be a black, lower-class female, but the clearer inference is that the causation of depression is a complex issue including intrapsychic as well as social factors.

Epistemological and Etiological Models of Depression

How a clinician determines the severity of a patient's depressive symptomology and what intervention strategies she or he will deploy depends on the philosophical and theoretical orientation of that practitioner. Currently, there are seven major models that exist which purport to

explain the cause of depression and which offer treatment approaches for the disorder. The most recognized theories are: the Psychoanalytic model, including ego-psychology, self psychology and object-relations theory; the Energy theories, which include thermodynamic conceptualizations, bioenergetics and metabolic considerations; the Life Events Models which emphasizes social conditions; the Person-Environment Model; the Biochemical Theories; the Existential Model; and the Cognitive-Behavioral Theories (Wetzel, 1984).

Cognitive Theories of Depression

The specific concern of this study focused on a cognitive-developmental approach to understanding and treating depression. As such, the major cognitive theorists will be presented here with a brief description of their models. In the second half of this literature review, the empirical studies which underpin these cognitive theories will be examined.

Negative Cognitive Set

Aaron T. Beck has concluded that a negative cognitive set is primary and that dysphoric affect is secondary to depression (Beck, Rush, Shaw, & Emery, 1979). Heavily influenced by the works of Adler, Kelly and Ellis, he rejected the psychoanalytic belief that people become depressed as a result of a need to suffer and instead hypothesized that a patient's thoughts and thinking patterns

were more accountable for depressive symptoms. Based on his clinical observations and experimental studies he developed and published a systematic theory of the origins of depression in the early 1960's. This theory is still evolving.

Beck's cognitive model draws upon three concepts to account for the psychological substrate of depression: 1) the cognitive triad, 2) cognitive schemas, and 3) cognitive errors.

The first branch of the cognitive triad is the depressive's negative view of the self. Basically, she or he views the self as defective, inadequate, diseased or deprived. The individual feels worthless, is highly critical of her or himself and views the achievement of happiness as impossible (Bebbington, 1985). The second branch of the cognitive triad is the depressive's negative view of current experience. The depressive views the world as making exorbitant demands upon the self and as placing insuperable obstacles in her or his way. The depressive experiences a sense of helplessness/hopelessness and misinterprets many events as representing defeat. The third branch of the triad is the depressive's pessimistic view of the future. The overriding perception is that suffering, difficulties, and hardships will continue unabated. Beck's theory postulates that motivational, emotional and behavioral changes flow directly from this triad (Wetzel, 1984).

The second major concept of this model is the role of the cognitive schemas that maintain the negativity of the triad even in the face of contrary evidence. Cognitive schemas, somewhat akin to personality traits, represent stable, longstanding thought patterns. Beck locates the origins of these schemas in early experience, usually from childhood. The schemas underlie the selective attention and abstraction which result in a particular interpretation of circumstances (Bebbington, 1985). These negative self schemas can be so strong that the depressive's ability to generate ideas or hypotheses about behavioral contingencies is severely limited (Derry & Kuiper, 1981).

The third major concept is the premise that both the triad and the schemas which underlie it are maintained by a process of faulty information processing. Beck conceptualizes this process as cognitive errors, wherein disordered thinking results from six basic errors (Bebbington, 1985; Levitt, Lubin, & Brooks, 1984; Wetzel, 1983):

- 1. Arbitrary inference (a response set) is reflected in conclusions drawn without adequate evidence.
- Selective abstraction (a stimulus set) refers to conclusions drawn on the basis of a single element among many possibilities.
- 3. Over-generalization (a response set) represents sweeping conclusions based upon a single event.
- 4. Magnification and minimization (a response set) are gross evaluation errors with little or no basis in reality.

- Personalization (a response set) refers to the proclivity to associate external events in a self referential fashion.
- Absolutistic, dichotomous thinking (a response set) is manifested in the tendency to classify all experiences in one of two opposite categories, with the decisive always at the negative extreme.

Beck views the depressed person as a victim of her or his own self-distortion. Treatment, then, is devoted to a reversal and realignment with reality of the client's "personal paradigm" (Wetzel, 1983).

Learned Helplessness Model

The learned helplessness model of depression, first described by Martin E. P. Seligman in 1975, proposed that events which the organism attempts unsuccessfully to control have peculiarly disruptive effects. Based on his experimental studies with dogs, Seligman believed that uncontrollable traumatic events can produce passivity in the face of emotional stress and can therefore result in an inability to learn effective methods of responding.

However, there were a number of inadequacies in his model and a reformulation which included the Attributional Framework was developed by Abramson, Seligman, and Teasdale, (1978), and Miller and Moran (1979).

The original model suggested that learned helplessness in humans includes three distinct features:

- It seriously affects the motivation of initiate behaviors,
- 2. it disrupts instrumental learning ability, and

3. it produces emotional disturbances.

The major innovation of Abramson was the inclusion of the dimensions of stability, globality, and controllability. Stable factors are those which the patient sees as being unlikely to change over time. Global factors are those which are likely to apply across a variety of situations. Controllability refers to the perceptions of the patient (internal versus external locus of control) as to what degree of control could have been exerted in a given situation and what explanation can be given for exercising a lack of control (Bebbington, 1985). In short, the kinds of causal attributions people make for the experience of lack of control determines whether depression or some other more adaptive response will follow (Abramson, Seligman & Tesadale, 1978).

Depression and Loss of Self Esteem

In 1962 E. Becker proposed that depression should be conceptualized in terms of three losses: self-esteem, game and meaning. The loss of self-esteem is seen as primary to inner-directed aggression. The concept of game refers to a sense of norms or rules for significant action. Becker believed that game loss could be considered as the paramount etiological factor in depression, whereas object loss would be considered as secondary. Meaning loss refers to a condition of the individual in which she or he perceives that there are no games worth playing. Thus, depression is

a function of self-esteem failure that is a consequence of the belief that life no longer holds a style worth living, or, in other words, that life has lost its meaning.

While this model has been substituted by more recent models, it does demonstrate the significance of self-esteem and it has generated a good deal of research that has added to our knowledge of depression (Butler & Whipple, 1983; Gardner & Oei, 1981; Gauthier, Pellerin & Renaud, 1983; Schafer & Keith, 1981). It has been identified as the primary building block of many cognitive models of depression.

Social Class Vulnerability Model

Two British researchers, George Brown and Tirrel Harris (1978) have produced a wealth of data which they interpret as supporting an etiologic role between social/environmental factors and clinical depression. Their central thesis is stated as "Clinical depression is an understandable response to adversity." They identify three types of factors:

- 1. <u>Provoking agents</u>, which are events capable of producing depression, such as recent live events, chronic difficulties, etc. Common to these events is the actual or anticipated experience of loss.
- 2. <u>Vulnerability factors</u> refers to conditions which increase the risk of depression in the presence of provoking agents. There are four specific factors identified: early loss of mother, involvement in the care of young children, the lack of an adequate confidant, and the absence of gainful employment.
- 3. Symptom formation factors which are experiences which do not increase the risk of depression but do help to shape the form that it takes and the severity it attains.

It should be noted that Brown and Harris strongly support a multifactorial view of depression which allows for genetic and constitutional as well as social causes. The social influences however, form the core of this theoretical model. Primary in this model is the depressive's cognitive appraisal of her or his world. How a person views the provoking and vulnerability factors will more accurately determine the type of reaction she or he experiences. The authors also strongly emphasize the role of self-esteem in their orientation to the etiology and treatment of depression (Bebbington, 1985; Levitt, Lubin, & Brooke, 1983).

The Interactional Model of Depression

In an attempt to utilize systems theory (Allport, 1960; Miller, 1971; von Bertalanffy 1950; Watzlawick, 1967) James C. Coyne has put forth an interactional model of depression. This model holds that both interpersonal and environmental factors must be considered in diagnosing and treating depressive disorders. Specifically the interaction and information flow pattern between a depressive and the environment is developed and given primary meaning by Coyne. Coyne does concede that a depressed person's feelings of worthlessness and helplessness may arise from a "depressive-core" in their personality. However he expands this position to indicate how the environment forms an isomorphic relationship with the depressive. Highlighting the

depressive's need for support and validation, the model details the system-maintaining feedback loops between the depressed individual and significant others. Often these feedback loops result in relationships typified by dependency and hostility (Coyne, 1975).

Depression as a Developmental Process

A model based on the work of Jack Hokanson and his colleagues purports that depression is a result of a person's social learning. Their findings suggest that the self-demeaning and self-punishing behaviors of depressives are used to avoid or reduce external adversiveness from the social milieu (Stone & Hokanson, 1969).

The model assumes that individuals learn various coping strategies to effectively reduce or avoid interpersonal stresses. Many people learn socially acceptable and adequate ways to handle such stress, whereas others learn less adaptive ways. Some learn that nothing is effective. Hokanson hypothesizes that within the broad area of human depression, it is likely that some individuals learn that depressive behaviors are effective means to control a hostile environment. In fact, it is theorized that such self-denigrating behaviors are efficient methods of gaining control over a threatening environment. This theory presents both a developmental framework and a conceptual scheme that extends the perspective of depression into the

realm of social learning theory. (Hokanson, Sacco, Blumberg, & Landrum, 1980; Hokanson & Shelter, 1961).

Developmental Therapy

Drawing extensively on the writings of Plato, Piaget,
Freud, and Lucan, Allen E. Ivey has conceptualized an
integrative developmental approach to therapy. Focusing on
the inherent dialectics of each writer, Ivey presents a
unified cognitive-developmental therapy model. This model
allows the clinician to examine the change in a patient's
consciousness throughout the therapeutic relationship.

Ivey (1986) views the construct of developmental therapy as an integrative position with four key perspectives:

- 1. A philosophical position that holds that life is a recursive process whereby the individual continually explores the interpersonal, intrapersonal, transpersonal and non-personal environment only to return to her or his beginning point. The results of this exploration is that the essence of that point of beginning is both finally realized and continually changing. In brief, we are the culmination of our total experience; past, present, and future.
- 2. A synthetic theory of human development within the counseling domain. Combining the work of Plato and Piaget, Ivey presents an innovative coherent progression of stages of development that a patient may pass through on her or his journey to self understanding.
- 3. A structure for the practice of therapy that enables clinicians to evaluate and predict a patient's level of cognitive-development and to design interventions that are isomorphic to the patient's cognitive level in order to effect appropriate movement through the cognitive-developmental levels.
- 4. Central to this model is the concept of coconstructivism. This concept holds that the therapist is

impacted by the patient through a reciprocal "give and take" process that is inherent in the existential movement of the therapeutic relationship (Ver Eecke, 1984).

Ivey views the discovery of the intelligence that transcends and infuses all the other levels of cognitive-development as synonymous with the dialectical awareness of the complexity of the self. Ascending in a spiral fashion, from the world of images and perceptions (sensi-motor level), to the world of visible things, and concrete action and thought (concrete operational level), to the intelligible world of abstraction and thinking (formal operations) and arriving at an awareness of the complexity and circularity of the world's interactions (dialectical level), the model posits that useful generalizations from these levels can empower individuals to master whatever developmental tasks they are confronting. (See Appendix A for a more detailed description of these cognitive-developmental levels.)

The Piagetian concepts of accommodation and assimilation are critical components of Ivey's model. How an individual changes or influences her or his world (assimilation) and how a person is influenced by the environment (accommodation) are viewed as twin processes that stand in dialectical relationship to one another. In therapy, the patient and the clinician engage in a combinatorial assimilation/accommodation process. Depending on the clinician's theoretical orientation, a therapeutic expectation will be established. This original expectation

could be at any point on the continuum from accommodative to assimilative. The patient will assimilate this information and respond accordingly or discontinue the relationship.

Once the therapeutic alliance is formed however, the interchanges at the interface of patient and clinician may be viewed as coconstructed within a very specific range.

The struggle to reach a cognitive balance between assimilation and accommodation is labelled as equilibration. Piagetian theory presents four types of solutions to the problem of equilibration:

1. Two alpha solutions:

a. Negative balance: Overemphasis on

Positive balance: assimilation Overemphasis on accommodation

2. Beta solution: Equilibration or balancing

between the two alpha

solutions

3. Gamma solution: A new totality or schema

is generated from past

accommodation and assimilation.

Assessing the Patient's Predominant Cognitive-Developmental Level

Ivey believes that adults continually pass through the same cognitive levels that children progress through on their way to maturity. Simply because a patient is a certain chronological age, the clinician cannot assume what cognitive-developmental level will be predominately in operation at any given time. Ivey cautions that all patients will be a mixture of several different cognitive-developmental levels and will most likely present many

previous uncompleted developmental tasks. These incomplete tasks often make it necessary for the clinician, in the beginning phase of treatment, to move the patient into lower cognitive levels of re-experiencing the world.

From the first verbal and non-verbal interaction, the clinician can be assessing the prevailing cognitivedevelopmental level of the patient. Descriptions of the presenting problems will be very indicative of the patient's ability to conceptualize her or his concerns. Key terms and phraseology are associated with each level. The concrete operational patient, for example will use action and sensory terminology. The late sensori-motor patient will present a cognitive construction of the problem that may include distortions, deletions and over-generalizations. The formal operational patient may appear to be analyzing the problem from a distance but often the thought process is replete with a pre-operational view of the situation or with late sensori-motor errors. Finally, advanced dialectical thinking may be encountered in the therapeutic situation, but these patients may still be misinterpreting their world. Ivey writes, "the individuals here have more complex thought patterns than those operating in earlier stages but their complexity has closed in on itself ... still missing important dimensions of the multipotentiality" of the solution (p. 164). Cognitive errors at this level include oversimplification, intellectualization and depersonalization.

Although development is a task-specific activity, clinicians must remember that patients may move quickly through several cognitive-developmental levels in response to skillful questions techniques. The critical issue is for the clinician to match therapeutic interventions to the patient's level in a developmentally isomorphic fashion. Questions at higher or lower levels will frustrate the patient and could eventually lead to a discontinuance of therapy. Therefore, it is essential to adequately assess the cognitive-developmental need and level of each patient and to design interventions accordingly.

Ivey describes three types of assessment procedures. First is the direct observation of a patients's nonverbal behaviors. If interventions are too low, the patient's nonverbal behavior is assertive and direct. interventions are too high, the patient's behaviors are supplicating and asking. The second procedure is identifying the patient's responses in six culturallyrelated dimensions: degree of verbal and non-verbal contradictions, valence of "I" statements, clarity of emotional expression, valence of adjective descriptors, position of locus of control and level of interdependence. The third method, pioneered by Weinstein and Alschuler (1985) proposes a four stage model of defining the level of patient thought. The stages are elemental self-knowledge, situational self-knowledge, pattern self knowledge and transformational self-knowledge.

The assessment procedures used in this thesis are detailed in the next chapter.

Moving Patients to New Cognitive-Developmental Levels

Ivey contends that the cognitive balance or the equilibration style of a patient, may represent a strength or weakness in the person's coping ability, and is the focus of the clinician's work. Ivey presents a highly developed schematic of the transformational process which a patient will move through as developmentally appropriate therapy progresses. The dialectic relationship between thesis, antithesis and synthesis is viewed as manifest in the patient/clinician alliance. As trust develops, the patient shares deeper and deeper aspects of her or his personal belief system and the clinician reflects any discrepancy that may be inherent in the statement. The patient in turn reacts to this reflection of self. As the patient explores this contradiction, a new synthesis may evolve. This process, described by Piaget as reflexive abstraction, moves the patient from a subjective, ego-centric form of thought to a more objective, holistic focused form of thought.

The elaborating, expansive model of movement can take one of two directions: horizontal movement or stage enhancement and vertical movement or stage progression.

These are important considerations since the goal of every therapeutic interaction will not merely be to move patients to higher levels of cognitive functioning. As a new

synthesis or insight is defined by the patient, she or he will need time to explore and integrate this new understanding. Horizontal decalage, as Piaget referred to it, is an integral aspect of the creative process and this lateral movement is a necessary element of the therapeutic process which permits a person to more fully perceive the many dimensions of a specific situation.

Critical to maintaining the changes generated from the transformational process is the need to alter the patient's environment. Ivey states that many theoretical orientations to therapy can provide the three essential structures if new forms of thought are to be sustained. First, the relationship between patient and clinician must be structured so that change will be made possible. Second, the patient must be given the clear message that change, creativity, risk taking, and self-disclosure are acceptable and are encouraged in this relationship. Finally, environmentally anchored forms of reinforcement and support must be in place at the dissolution of the therapeutic relationship.

Integration of Cognitive Models of Depression and Developmental Therapy

While the uncertainty of a causal relationship between cognitive distortions and depression still continues in the clinical and research fields, it is quite clear that irrational beliefs and cognitive distortions covary with

behavioral symptoms of depression (Chan, 1985; Coyne, 1982; Hollon, Lumry & Kendell, 1986; Lewinsohn, Steinmetz, Larson, & Franklin, 1981; Rush, Weissenburger & Eaves, 1986; Silverman, Silverman & Eardley, 1984). All the cognitive models of depression described above emphasize the interpretation process of the patient. How the patient views the self, the world, and her or his interventions in the world are central to the development and maintenance of depression.

In terms of Piaget, depressives are over-assimilators. They are consumed with viewing the world in a self-referential fashion. Ivey's description of cognitive equilibration is critical in helping the patient achieve a less pejorative balance between assimilation and accommodation and moving the patient from a negative alpha solution to a beta or gamma solution.

The cognitive theories of depression are extremely compatible with the Developmental Therapy model presented by Ivey. The cognitive models stress the patient's assessment of their competencies, their encoding and categorization of events, and the patient's perceived locus of control (Mischel, 1973). Ivey's diagnostic process incorporates assessment on all these levels to arrive at a predominate cognitive-developmental level (Ivey 1986).

Unlike the ambiguity of most models of cognitive depression, Ivey's model gives specific direction for the clinician in establishing the goals of therapy. The

self-referential style of the depressive is the aim of therapy. Ivey contends that assisting the patient to accomplish earlier uncompleted developmental tasks and moving her or him to a more effective level of cognitive abstraction are the aims of developmentally appropriate therapy. Ivey's model views dysfunction as a developmental process and this concept may be applied to the field of depression. Clinicians using this model will not merely view the depressive's psychological state as static but as the culmination of many events which have resulted in a state of depression.

Beck's cognitive triad that permeates the depressive's thinking are theorized to arise from early traumatic experiences (Beck, 1968, 1974). Therefore Ivey's theory of re-cycling patients back through previous developmental levels is also consistent with theories of depression etiology. Research by Kirstein and Bukberg (1979) found that depressed patients newly admitted to hospital settings had high scores on a scale measuring "temporal disintegration" or high feelings of depersonalization. Ivey's direction to return to the sensori-motor stage of perception would be helpful in closing the gap between the patient and her or his environment at this critical phase of establishing a therapeutic relationship.

Finally, all the cognitive theories of depression describe constricted conceptualization capabilities of the

patient. This includes defects in problem-solving (Nezu, 1986), social judgement (Lewinsohn, Mischel, Chaplin, & Barton, 1980), memory and learning tasks (Willner, 1984), cognitive processing (Beck, 1967), and interpersonal assessment (Coyne, 1976). Ivey's dialectic model seeks to raise the consciousness of the patient through interaction with the clinician. The goal is a more adaptive level of perceiving the environment that allows the patient to open her or his perspective to a larger view of reality or, as Lacan states, to enter into a positive and flexible "discourse of the Other" (Ivey, 1986).

In sum, Ivey's work has direct pragmatic implications for the cognitive treatment of depressives. The prevailing models of depression emphasize the cognitive functioning of the patients. Ivey's model provides the clinician with a procedure to diagnose the cognitive-developmental level of the patient and presents a coherent framework from which to design and evaluate the efficacy of therapeutic interventions. The aim of all these interventions is to extend or expand the patient's level of cognitive functioning.

Part II

Empirical Studies of Depression

In this section empirical studies of the cognitive model of depression will be reviewed. The organization of this section is divided into four major areas. First,

experimental research which test hypotheses developed from cognitive theories will be discussed. Second, studies that attempt to prove a causal relationship of specific conditions to depression will be presented. Third, research efforts which test the efficacy of cognitive interventions in the treatment of depression will be analyzed. Finally, current research models and theories in the application of a cognitive conceptualization of depressive disorders will be summarized. The intent of this section is to provide a theoretical and empirical foundation for the use of Ivey's cognitive-developmental therapy in the treatment of depression.

Cognitive Processes in Depression

Dobson and Shaw (1986), used five cognitive assessment measures to examine the stability of cognitive patterns in major depression. The battery of instruments included: the Automatic Thoughts Questionnaire (Hollon & Kendall, 1980), the Dysfunctional Attitude Scale (Weissman, 1978), the Interpretation Inventory (Stake, Warren & Rogers, 1979), the Cognitive Response Test (Watkins & Rush 1983), and the Differential Anxiety and Depression Inventory (Dobson, 1980). The complete battery was administered to three groups of hospitalized subjects: depressed psychiatric, non-depressed psychiatric, and non-psychiatric patients. Administration occurred over three time periods: upon admission, during depression, and upon remission. Subjects

were differentiated into cohorts by the use of the Hamilton Rating Scale of Depression and the Beck Depression Inventory.

The results of this study suggest that the cognitive assessment instruments which are specific to major depressive disorders possess strong internal reliabilities and correlate well with both themselves and measures of severity of depression. The second finding was that some aspects of cognition related to depression remain stable even in the face of change in level of depression.

Specifically, unstable thoughts associated with depression did change but underlying attitudes did not. These findings and the unchanged results of the other instruments led

Dobson and Shaw to conclude the existence of a stable core of situationally tied negative interpretations and to suggest support for the cognitive model of depression.

In a similar study, Miller and Norman (1986) used the Cognitive Bias Questionnaire (Krantz & Hammen, 1979) as the dependent variable, with depressed and non-depressed psychiatric patients and a non-depressed, non-psychiatric control group. A battery consisting of the Beck Depression Inventory (Beck, 1970), the Shipley Vocabulary Scale (Boyle, 1967), and the Structured Interview Present State Examination (Wing, Cooper & Sartorius, 1974) was administered at the times of admission to and discharge from the hospital setting.

The findings of this study appear on the surface to be contrary to Beck's cognitive theory, in that they found no evidence of persistent maladaptive cognitions following remission. Beck's theory hypothesizes that depressive schemas will be present after improvement (Beck 1976; Beck, Rush, Shaw & Emery, 1979). However, when the sample was subdivided according to high or low initial levels of cognitive distortion, clear patterns were uncovered that confirmed that for the high distortion subgroup this cognitive style persisted even after remission. Together with the work of Hamilton and Abramson (1983), and their own previous study (Norman, Miller & Klee, 1983), the authors suggest that approximately 50% of depressed patients exhibit significantly elevated levels of cognitive distortion.

Rush, Weissenburger and Eaves (1986) found that dysfunctional attitudes are predictive of depressive symptomatology, a finding that is confirmatory of Beck's hypothesis. These researchers suggest, with regard to treatment, that in order to achieve a lasting prophylaxis, underlying schema or attitudes need to be altered.

Seeking to explore whether distorted cognitive processes are different for primary nosologic groups, the unipolar and bipolar depressives and between primary and secondary depression, Hollon, Lumry and Kendall (1986), have reported the results of their study using nine clinically discrete subgroups. Using the Automatic Thought Questionnaire (Hollan & Kendall, 1980) and the Dysfunctional

Attitude Scale (Weissman, 1978), the authors report that both cognitive measures discriminated between diagnostic groups differing on levels of syndrome depression, although the primary nosologic groups did not differ from the secondary depressives. The Automatic Thought Questionnaire appeared to demonstrate greater specificity than the Dysfunctional Attitude Scale. Hollon, Lumry and Kendall conclude both measures appear to reflect aberrant cognitive processes present in syndrome depression.

A central tenet of the cognitive model of depression is the concept that the severity of depression is a crucial determinant of the content and cohesiveness of the patient's self-schema. Kuiper and Derry (1979) report data which supports this belief. They state that their findings offer strong empirical evidence for Beck's (1976), contention that depressive content becomes more central in cognitive structures as depression level increases.

Ross and Mueller (1983), expanding on Kuiper's work provide evidence that depressives use different information processing strategies than non-depressives. Mild depressives rely on cognitive processes based on familiarity or distinctiveness as opposed to strategies which are consistent with self-schema. Their work points to the developmental process which the depressogenic self-schema goes through.

Davis and Unruh (1981), also provide evidence that in depression, the self-schema is in a transition phase for

short-term depressives and that it becomes a stronger information processor for long-term depressives.

Looking for the specific cognitive mechanisms that predispose depressives to less effective learning systems, Weingartner, Cohen, Murphy, Martello and Gerdt (1981) investigated the structure of the strategies that depressives use to process information. Their findings link disruptions in cognitive functions to show that a depressive fails to adequately encode information. Their results indicate that depressives find it difficult to use structure when its form of presentation requires an active restructuring of input events. This failure to reorganize information is demonstrated by poor memory and ineffective learning.

Consistent with the previous finding, Davis (1982), reports a study that documents that depressives fail to remember data that is received from outside sources, thus convincing the depressive that she or he is doing poorly. Feedback in this situation along with other perceptions and long-standing ideas about self-worth, leads the depressive to evaluate the self with a negatively distorted inferential set.

Nezu (1986) reports two studies that assess the strength of the relationship between the appraisal of one's problem solving effectiveness and depressive symptomatology. His results indicate that the depressed group appraised their overall problem-solving attempts as less effective and

less systematic and that this same group reported lower ability to maintain personal control in problem situations.

Strack and Coyne (1983), argue against Beck's position that the depressive's unfavorable self-perceptions are unrealistic. In fact, they suggest that the depressive's accurately perceive their ineffectiveness in task-oriented and interpersonal situations. This finding is also supported by Lewinsohn, Mischel, Chaplin and Barton (1980), who found that depressives were rated by both themselves and others as less socially competent than control subjects.

Grabow and Burkhart (1986) tested these conclusions in a highly structured social interaction task. The results indicated that depressives did not exhibit a social skill deficit and were not rated by others as less likeable, less socially skilled or more anxious. The authors explain the findings of a lack of difference as due to the nature of the task. The interaction was of a short duration, and the evaluation criteria was concrete and specific, thus minimizing the potential for cognitive distortion.

The concept that depressives are hypersensitive to stimuli suggestive of loss and blind to stimuli representative of gain (Beck, 1976), has been tested by a number of research studies. Nelson and Craighead (1977), reported that depressed subjects recalled less positive and more negative feedback than non-depressives, and that depressives less often self-reinforce their efforts.

Kuiper, Derry and MacDonald (1980), also found that depressed subjects displayed superior recall for self-referenced, depressed-content, while non-depressed subjects displayed superior recall for self-referenced, nondepressed-content. Gotlib and McCann (1984) also found evidence to conclude that depressives have greater accessibility than non-depressives to negative content constructs.

Tota and Bargh (1985), conducted a study whereby subjects were to decide if positive or negative adjectives described themselves or others. They varied the amount of attentional capacity available for this task by having the subjects keep a six-digit number in their short-term memory. Their findings indicate that depressives, even under the condition of scarce attentional capacity, still efficiently process negative trait characteristics when judging themselves. This was not the case for non-social and self non-depressed judgement tasks, thus providing confirmation of the hypothesis that a negative self-schema appears to be in operation for the depressive's style of processing of information.

Greenberg and Pyszczynski (1986), reported consistent findings in two studies where depressives' self-focusing styles were explored. They found that depressed persons were more self-focused after failure than after success. They support the contention that depressives are obsessed with their problems and are resistant to focusing on their more positive behaviors. The authors state that their

findings are consistent with the idea that depressed persons are motivated to maintain a negative self-image. They theorize that depressives may find comfort in such a view of themselves because it offers a convenient, unassailable explanation for the negative outcomes they experience, it minimizes demands for future positive outcomes, and it greatly reduces the potential for disappointment when additional negative outcomes occur. This concept is extremely compatible with Beck's idea of a system-maintaining self-schema.

Implications of These Studies

The preponderance of research indicates that a negative self-schema is a significant cognitive construct that must be appreciated for its system-maintaining properties and not merely confronted with positive data in the therapeutic arena. Undergirding this schema are the dysfunctional attitudes and negative evaluations that a depressive holds relative to her or his situation. These studies underscore the need for assessing the patient's cognitive transformations of environmental input (Nelson & Craighead, 1977). Ivey's Developmental Therapy presents a system to identify and change this cognitive transformation process.

The ineffective learning, poor memory, attentional difficulties and misperceptions of interpersonal feedback, which are identified with depressive episodes, also lend themselves to being addressed within a Developmental Therapy

framework. Ivey's continuum of interventions which stress the importance of returning the patient to the sensori-motor stage, assists the depressive to explain in her or his own natural language the signs, sounds, feelings and actions of specific situations. Thus by realizing that depressives will have trouble with memory and recall, a cognitive-developmental clinician will return to this stage numerous times throughout the course of treatment. Also, because it is viewed as a significant aspect of the treatment, negative connotations will not be associated with this "going back to the beginning" process.

The major aim of Developmental Therapy is to help patients expand their cognitive understanding via a dialectical encounter with the clinician. Depressives, in need of developmentally appropriate alternative perspectives, can benefit significantly from the kind of cognitive dialogue which Ivey describes.

Etiology of Depression

Although Beck (1967), originally hypothesized that low self-esteem is a basic etiological component of depression and although previous studies conducted by Coleman (1975), Flippo and Lewinsohn (1971), Haley and Strickland (1976), Loeb, Beck, Diggory and Tuthill (1967), Ludwig (1975), Scheier and Carver (1977), and Wilson and Krane (1980), have supported the causal relationship between low self-esteem and depression, recent studies have clearly documented that

the relationship is not causal (Butler & Whipple, 1983; Chan, 1985; Coyne & Gotlib, 1983; Hollon, Lumry & Kendall, 1986; Lewinsohn, Steinmetz, Larson, & Franklin, 1981; Silverman, Silverman & Eardley, 1985).

Ganellen and Blaney (1981) and Blaney (1980), suggest that depression is essentially an affective, emotional disorder and it is the role of mood that is significant in the development of the illness. They speculate that mood functions as an enhancer of certain aspects of self-schema. Their etiological model suggests "that the perception that an irremediable, serious negative state of affairs exists itself tends toward depression, and that this tendency is enhanced both by self focus and by negative mood itself," (p. 11) thus the depressogenic cycle begins.

The work of Moos and his colleagues, present a socialenvironmental model of depression etiology. Billings,
Cronkite and Moos (1983), report on a study that examines
the role of stress and coping factors. Their results found
that depressives significantly differed from non-depressives
in the presence and severity of environmental stressors,
types of coping responses and amount and quality of social
resources. They conclude that the lack of effective coping
styles and of a supportive interpersonal network may
contribute to depression independently of exposure to life
stress. Their research indicates that depressives have
difficulty making decisions and taking action.

O'Hara, Campbell and Rehm (1982), also found stressful life events to be strongly predictive of women who would experience postpartum depression.

Beck noted that depressed persons may not continually demonstrate a self-critical cognitive style, but may have latent cognitive schema that are activated during periods of stress. Haley and Strickland (1985), found that stressful interpersonal situations exacerbate the depressive's negative self-evaluation, thus highlighting the role of stress in the depressive process.

O'Neil, Lancee and Freeman (1986), also identify stressful life events, low social support and a family history of psychiatric illness as having a significant, independent, and direct effect on the occurrence of depressive symptoms.

Meddin (1986) reports the findings of the Quality of American Life Survey taken in 1978. The results indicate that sex differences in depression are less than significant and that social stresses (i.e., satisfaction with job, family, self) are associated with depression. These findings are confirmed by Newman (1984) and Weissman and Myers (1978). Therefore, gender has been ruled out as being a significant etiologic factor.

Young and Grabler (1985) purport that the rapidity of the onset of depressive symptoms is critical in classifying the type of depression and determining the type of intervention. Their work reminds us that it is not necessarily the content (the symptoms), but the process (the rapidity of onset), that is also important in our etiological understanding of depression.

Krantz (1985) presents a reciprocal influence model of depression etiology that suggests that environmental influences affect the development of a negative cognitive schema. In the first stage, the well-organized, nondepressive schema begins to weaken and feedback from the social milieu indicates inadequate interpersonal relationships and stressful life events. At this point, depressive symptomatology begins to show. The ensuing transition period is marked by dysphoria and other symptoms of depression, but the schema during this period is weak and relatively limited in its capacity to organize information from the environment. Finally, as the duration of the depression lengthens, the schema gradually increases in strength and organization. This belief is also supported by the work of Ross and Mueller (1983) and Davis and Unruh (1981).

Implications of These Studies

The literature indicates that the role of a negative self-schema is contested as a causal factor in clinical depression. The nature of this construct is also obfuscated and imprecise. Ivey's model has tremendous potential to bring clarity to this dilemma. Rather than searching for underlying attitudes, Developmental Therapy would have the

clinician identify cognitive styles. If the research of this thesis indicates that cognitive-developmental levels can be identified and empowered through therapeutic intervention, then, over time, a cognitive profile may be outlined that identifies persons at risk for depressive illness. Ivey's concept gives to both the clinician and the researcher a methodological framework and explicit criteria to focus in on the cognitive causes and effects of depression.

The roles of stressful environmental factors and problem-solving styles have also been indicated as potential causal factors in depression. Ivey's work has direct preventative and treatment application in these areas. Developmental Therapy enables people to gain a more comprehensive perspective of their situation and to move from a unidimensional, dependency-oriented position, to one that is moderate, multidimensional and multipotential. As patients advance to more inclusive levels of cognition, they are able to see a larger picture which minimizes single entity stresses and maximizes potential resources.

From the reciprocal environmental model proposed by

Krantz, it could be hypothesized that a stronger schema

would be more resistive to movement through the therapeutic

stages. Developmental Theory would assist the clinician in

assessing the strength of the cognitive scheme. This

information would benefit the clinician in diagnosing the

severity of the depression and would suggest that treatment

efforts should be focused on horizontal growth and not vertical movement along the developmental continuum.

Cognitive Treatment of Depression

Beck's system of psychotherapy for depression is based on his belief that disordered cognitions directly produce clinical depression. To counteract this process, Beck's foremost intervention is cognitive reorganization. Through the use of several logical and didactic intervention strategies, Beck helps the patient identify cognitive distortions and to question their validity. Techniques include activity schedules, graded task assignments, cognitive reappraisal, cognitive rehearsal and specific homework assignments. Cognitive psychotherapy, as Beck views it, is not just a cerebral, non-directive approach, but rather forces patients to view cognitions in relation to emotions and behaviors.

In 1977, Rush, Beck, Kovacs, and Hollon, presented the results of a study that indicated that resistant depressives improved to a significantly greater degree when they were treated in an individual cognitive modality as opposed to a pharmacotherapy modality. In six and twelve month follow up reports, the persons treated with drugs alone were more likely to return to treatment than persons in the cognitive therapy group.

In an expansion of this research, the same team reported that a combination of drug treatment plus cognitive

therapy did not result in greater gains than cognitive therapy alone (Rush, Beck, Kovacs, and Hollon, 1979). Beck also states that in his clinical experience there are few patients who "break the impasse" of depression through antidepressant medication treatment alone.

Blackburn, Eunson, and Bishop (1986) report similar findings in a two-year naturalistic follow-up study of patients treated with cognitive therapy, pharmacotherapy and a combination of both. In this study, the two cognitive therapy groups suffered less recurrence of illness than the group solely treated with medication. The authors contend that cognitive therapy is effective in reducing a person's vulnerability to depression.

In a study relating the role of self-esteem to depression, Gardner and Oei (1981), also examined the treatment effects of a cognitive versus behavioral approach. Although no significant correlation between depression and self-esteem was evident at the beginning of treatment, a clear negative relationship was evident for the cognitively treated group upon completion and at follow-up intervals. The authors also state that the results further indicate that a cognitive approach was more effective in decreasing depression and maintaining this effect than the behavioral approach.

McNamara and Horan (1986), report on their efforts to test the construct validity of the cognitive and behavioral models of depression. Their methodology included not just generalized measures of depression, but also specific instruments developed from the research in each theory. Analyses of data from pre-treatment, mid-treatment, posttreatment and follow-up intervals revealed that the cognitive treatment factor produced a consistent and durable impact on a battery of devices reflecting cognitive manifestations of depression and was somewhat generalizable to the behavioral domain as well. Meanwhile, the behavioral treatment factor failed to produce improvement within the corresponding behavioral assessment battery or on any cognitive device. Their conclusions are not an indictment against the use of behavioral therapy. In fact, on the post-mortem analyses of the scores on Beck's Depression Inventory, both groups displayed successful outcomes. advice to the behavioralists is to develop more sensitive instruments. However, they do indicate that cognitive therapy is both cost effective and more efficacious in the treatment of depression.

A study that evaluated the effectiveness of two cognitive strategies was reported by Gauthier, Pellerin and Renaud (1983). The subjects were each assigned to one of four treatment groups: a) cognitive restructuring, b) cognitive rehearsal, c) self-observation, and d) delayed treatment control (waiting list). Their findings indicate that cognitive restructuring and cognitive rehearsal were equally effective in improving self-esteem and reducing depression. Interestingly though, they found no significant

therapeutic advantage of the cognitive strategies over the self-observation method. They speculate that the role of self-awareness is critical in the expansion of positive self-esteem. They conclude that because cognitively induced increases of self-esteem were found to result in marked decreases of depression, the research provides some implicit support for Beck's theory.

Implications of These Studies

The work presented here clearly demonstrates the significance and efficacy of a cognitive approach to the treatment of depression. The studies underscore the need for assessing the patient's predominant level of cognitive functioning and matching this with appropriate cognitive intervention strategies. In developmental terms, for example, patients operating at a concrete level of abstraction, are best treated when the interventions stress sensori-motor phenomena. Weiner and Crowder (1986), while not working with depressives, have shown that while concrete-thinking can be an obstacle to insight-oriented therapy, it is no obstacle to changing attitudes and behaviors by appropriate task-oriented assignments, education and even paradoxical interventions.

Ivey's Developmental Therapy model potentially offers more precise methods of cognitive interventions.

Interventions that approach each patient at their own level of abstraction can help the patient move to more effective

problem-solving stages, thus increasing her or his selfesteem and diminishing the chances of relapse. The success
of any counseling approach will depend in part on whether or
not an individual is capable of achieving the level of
abstraction required by the intended modification (Germain,
1984). With the cognitive-developmental model espoused by
Ivey, clinicians will be able to assess the level of the
patient's cognitive functioning and use developmentally
appropriate interventions. The work of Gauthier, Pellerin,
and Renaud (1983) indicates the importance of selfknowledge. Ivey stresses this as the basic goal of
developmental therapy.

Research Studies on Developmental Therapy and Depression

Research articles in the field of cognitive models of depression were reviewed earlier. In this section, the intent is to present research articles in the field of developmental therapy. Two articles relate directly to the field of depression.

Stehouwer, Bultsma, and Blackford (1985), report on their study to determine if differential cognitive-perceptual distortions exist for depressed adolescent and adult females. Their results indicate significant similarities between the groups in anger at self and sense of failure. The authors suggest that these may serve as unifying themes for the two populations. Their data also indicates significant differences between the two groups.

Adolescent female depressives demonstrate a preoccupation with how others view them and perceive themselves as failures in the eyes of others, thus viewing their depression in an externalize fashion. However, adult depressives are over concerned with their own view of themselves and perceive themselves as failures in their own eyes, thus having a much more internalized locus of control.

Angelillo, Cimbolic, Doster and Chapman (1985), describe their work in the field of personal construct psychology and depression. Using a population of depressed patients, psychiatric non-depressed patients and normal controls, their results suggest that depressed individuals often seem unable to discriminate between differing levels of such concepts as good, bad, success, and failure. They viewed this ambiguity of cognitive constructs as serving a defensive role for depressives. They extrapolate that in order to break the cycle of poor social validation, therapeutic work must be aimed at reducing conceptual ambiguity.

Combining locus of control theory and developmental levels of abstraction, Germain (1985), presents a stage-structural model. At the highest or integrated level, individuals can understand the interdependence and reciprocal relationships between causes of a specific situation. This level is comparable to formal operations. At level two, the individual understands the causes of a specific situation. The person at this level is able to

represent empirical relationships. This stage is comparable to Piaget's concrete operations phase. At level one, an individual can identify events and actions but fails to appreciate underlying relationships of causality. This stage is similar to the late sensori-motor level of development. While Germain's works (1984, 1985) are oriented to school-age children, it is consistent with the major theoretical structure of this thesis.

An ontogenetic analysis of parental understanding of their relationship to their children that is based on the work of Selman, Kohlberg and Gilligan is presented by Newberger and Cook (1983). In their study to determine differences in child-rearing practices of urban and rural parents, they present a four level model of parental awareness. Level one is an egotistic orientation. Here the parent's needs are primary and the objective of socializing the child is to maximize parental comfort. Level two is a conventional orientation. The child's subjective reality is conceived in a stereotypical way. The parent draws on tradition, authority or conventional wisdom in decision making situations. Level three is the individualistic (child) orientation. Each child is recognized to have unique as well as universally shared qualities and is understood in terms of his or her own subjective reality. The final level is an analytic orientation. The parent can view the relationship between parent and child as a mutual and reciprocal system and understands the child as a complex psychological self-system. Although their work is in the field of parenting, their developmental model demonstrates its utility in many aspects of increasing cognitive functioning.

Bruce (1984), presents a continuum of therapy goals. His continuum is adapted from Maslow's hierarchy of human needs. Starting with the primary ego needs of safety and security, moving through socialization, competence, selfesteem and self-realization stages, he describes appropriate counseling goals and therapeutic models to achieve these goals. He concludes by suggesting that it would be efficacious for clinicians to work differentially with different patient problems based on a diagnosis of where they fall on this continuum. A significant problem with this model is that it does not provide adequate criteria which clinicians could use in the diagnostic autotreatment phases.

Martin (1985), presents a graphic mapping process as a method to assess cognitive-development through the course of therapy. He believes that at the underlying cognitive level competence depends on the acquisition of organized, structures of procedural and declarative knowledge and that, at the high level, executive or metacognitive ability exists to manipulate and use basic knowledge to achieve personal plans and goals. He further states that accessing and representing a patient's cognitive structures may be helpful to researchers in the field of counseling psychology.

Martin does not see mapping as the sole method of assessing cognitive functioning but rather, believes that a sensible use of multiple methods should be considered that includes graphic methods.

The developmental frameworks of Anderson, (1982), Ellis (1986), and Howard, Nance, and Meyrs (1986), provide the practitioner and researcher with specific assessment strategies which facilitate a more accurate diagnosis of the patient's thinking process and style preferences. The specificity and generalizability of these models place developmental therapy near the center of the counselor education field.

Gabbard, Howard and Dunfee (1986), report on the construct validity of a scale which measures a counselor's adaptability. Based on a belief that counselor adaptability is highly predictive of counseling outcome, their instrument—the Counselor Behavior Analysis Scale—was used in three separate studies. Their results confirm the construct validity of this scale. Their research has tremendous implications for practitioners and researchers, in that a partial explanation for differences in effectiveness among counselors is now beginning to unfold.

Implications of These Studies

The research literature is consistent in the call for explicit, reliable and valid methods of assessing and advancing a patient's level of cognitive-development. In

the field of depression, research with Ivey's model could produce significant breakthroughs in the understanding of the role of cognitive-development, self-esteem, the nature of schemata, and the delineation of preventative measures.

The developmental field is still not unified and is in the fledgling stage. Ivey's work has the potential of addressing this diversity and immaturity, and to provide the field with a methodological framework that can generate many empirical research projects in a variety of dysfunction and education related situations.

Finally, Developmental Therapy provides a definite base of knowledge which can be transmitted to clinicians and clinicians—in—training and which can be measured in regard to each clinician's ability to understand and utilize this knowledge. Research efforts in the area of clinician—training could also be developed that could advance the efforts of the field of counseling psychology.

Chapter Summary

This chapter began with a definition of depression and its concomitant symptomatology. DSM-III(R) definitions were presented as well as the results of the national depression survey. Together these establish the background of the pervasiveness and cognitive and emotional effects of this illness.

Competing etiological models were next presented. The theories of Beck, Seligman, Abramson, Becker, Brown and

Harris, Coyne, and Hokanson were described. The unifying theme in all these theories is the role of self-esteem, its development and maintenance, and the patient's view of her or his world.

The cognitive-developmental model as described by Ivey was then outlined. The levels of cognitive-development were reviewed and the critical influences of assimilation and accommodation were grounded in the theory and practice of developmentally appropriate clinical practice.

Next, methods of assessing a patient's predominant cognitive-developmental level and strategies to have patients move through the stages were reviewed. Fundamental to Ivey's work is the dialectic relationship between patient and clinician. Suggestions for providing a safe and encouraging environment, where patients will be empowered to make therapeutic gains, were then provided.

The first section of this chapter ended with an integration of the theories of depression and Developmental Therapy. The compatibility between these theories was highlighted in both theoretical and pragmatic terms.

The second part of this chapter reviewed the empirical studies that support the cognitive model of depression and the etiological relationships and efficaciousness of a cognitive method of treating depression. Each section was summarized by relating the literature review to the work of this thesis.

The final section surveyed research work in the area of developmental therapy. Two articles dealt specifically with research in the field of depression and the others were general articles in the emerging field of developmental methods of therapy.

The thrust of this chapter was to lay the theoretical and empirical foundation that would support the use of Ivey's Developmental Therapy model with depressed patients. In the next chapter, the methodological design based on this research will be presented.

CHAPTER III

RESEARCH METHODOLOGY

Introduction

As stated previously, the purposes of this dissertation were to investigate the reliability of the cognitive-developmental classifications derived from Ivey's Developmental Therapy Theory (1986), to investigate the predictive validity of the intervention strategies designed in accordance with this model, and to examine long-term and short-term depressives from a cognitive-developmental frame of reference.

with the criteria and procedures that were used to address the purposes above. The chapter is divided into seven sections, including this introduction. The second section presents the specific hypotheses that were addressed in the study. The third section familiarizes the reader with the steps taken to carry out this project in a hospital setting. The fourth section describes sample selection, composition, and size and defines the criteria used to sub-divide the sample population into "short-term and long-term depressive" comparison groups. The fifth section describes data collection tools. The research design and data collection

procedures are presented in section six. Finally, section seven outlines procedures for statistical analysis.

Hypotheses

This research is the first empirical investigation of the reliability of the cognitive-developmental classifications derived from Ivey's Developmental Therapy Theory and the predictive validity of the intervention strategies designed in accordance with this theory.

In terms of investigating reliability, this study examined whether or not the cognitive-developmental levels defined by Ivey could be identified and classified with satisfactory reliability. Two basic questions and their related hypotheses addressed this issue:

- 1) Can a patient's predominant cognitivedevelopmental level (PCDL) be classified reliably
 at the beginning of the standard interview? PCDL
 was defined as the cognitive-developmental level
 that stands out above all others.
 - H₁) An inter-rater reliability of .85 (or better) can be computed for the PCDL of patient statements during the assessment phase of the Standard Cognitive-Developmental Interview.

Basically, this hypothesis sought to determine whether or not the assessment phase of the SCDI could elicit patient verbalizations that could be reliably identified as to the predominant cognitive-developmental level represented by the statements.

2) Can sets of patient statements, made in response to different types of clinician questions during the standard interview be classified reliably?

H₂) An inter-rater reliability of .85 (or better) can be computed for the cognitive-developmental level of patient statements during the eight intervention sections within the treatment phase of the Standard Cognitive-Developmental Interview.

Basically, this hypothesis sought to determine if the eight intervention sections in the treatment phase of the standard interview could elicit corresponding patient verbalizations that could be reliably rated.

In terms of investigating predictive validity, this study examined whether or not patient response styles, as represented by their statements during the treatment phase of the SCDI, change with differing types of questions and intervention strategies from the clinician. The Developmental Therapy Model postulates that patients can be directed to talk about their issues at varying levels of cognitive-development depending on how the clinician asks questions or provides interventions. This led to the third question and its accompanying hypothesis:

- Given that a clinician asks a patient a standard series of intervention questions oriented toward a specific cognitive-developmental level, does the patient in turn offer a set of verbal statements at the same level? In effect, can we predict patient response from specific clinician interventions/questions?
 - H₃) Patients who are asked a standard series of intervention questions at each level of developmental cognition will respond with a set of verbalizations indicative of that level.

Basically, the effort was to examine whether or not patients do respond with verbalizations that directly correspond to

the cognitive-developmental levels epicted by clinician interventions (i.e., Could patients respond with "early-concrete" verbalizations when clin: ians offer "early-concrete" questions?).

The population of depressives as then examined in two ancillary hypotheses. Literature : ggests that a difference exists between the self-schema of I ng- and short-term depressives and that long-term depi ssives are less responsive to therapeutic intervent on than short-term depressives. These theoretical precises served as the basis for the last two hypotheses:

- H₄) The PCDL of short-te m depressives during the assessment phase of he standard interview will be classified a higher level than that of long-term de ressives.
- H₅) Short term depressives will follow the predictions of hypotesis three more often than long-term depressives.

Basically, these two hypotheses examined whether or not long- and short-term depressives differed in their responses to the SCDI. The reliability and which lidity data generated for hypotheses one and three were were and to examine these two types of depressives.

Description of Sample opulation

The population for this study onsisted of twenty, consenting patients from a central onnecticut municipal hospital psychiatric inpatient unit. The sample group was between the ages of fifteen and seventy-four and had primary

DSM-III-(R) diagnoses of mood disorder or adjustment disorder with depressed mood, mixed disturbance of emotions and conduct, or mixed emotional features. Nineteen patients were consecutively admitted subjects and one was the last subject of the pilot study that was not needed during the initial practice. Due to the expense of transcription, it was decided to use this patient as the first subject for this research. Exclusionary criteria related to mood disorder diagnoses were mood syndromes, psychotic features, bipolar disorders and cyclothymia. Exclusionary criteria independent of diagnostic category were evidence of mental retardation or severe psychoactive substance abuse or dependence, and evidence of a primary Axis II diagnosis, or a secondary Axis II diagnosis of Schizotypal or Borderline Disorders (see Appendix F for further details).

The population was further divided into two groups of ten subjects who were diagnosed as either long- or shortterm depressives. For purposes of this study, the following criteria were used to classify each patient:

A. Short-term depressive

- 1. Diagnosis of adjustment disorder
- 2. Diagnosis of mood disorder, single episode with a duration less than six months
- 3. Diagnosis of mood disorder recurrent
 - a. Duration of current episode less than six months
 - b. Duration of previous episode less than six months
 - c. Duration of remission over one year

B. Long-term depressive

- Diagnosis of mood disorder, single episode with a duration over six months
- 2. Diagnosis of mood disorder, recurrent
 - a. Duration of current episode over six months
 - b. Duration of previous episode over six months
 - c. Duration of remission less than one year

Table 3.1 presents the demographic characteristics of the sample population. An investigation of age yielded 15% (n = 3) in the 15 to 30 year age range, 40% (n = 8) in the 31 to 40 age range, 10% (n = 2) in the 41 to 50 age range, 20% (n = 4) in the 51 to 60 age range and 15% (n = 3) in the above 61 age range. This demonstrates the span of age ranges participating in this study.

The population was homogeneous in terms of social considerations (Caucasian) and predominately female (n = 18). The majority of subjects (n = 12) did not identify with any significant ethnic reference groups. In terms of formal educational training, 10% of the group (n = 2) noted that they had less than eight years of schooling, 70% (n = 14) stated they had at least eleven years of schooling, 15% (n = 3) noted some college training, while only one patient had completed four years of college.

One subject (5%) was a student, two subjects (10%) were unemployed at the time of hospitalization, nine subjects (45%) were employed in a unskilled occupation, three subjects (15%) in a skilled position and five subjects (25%) were retired. In terms of income, 50% (n = 10) indicated

Table 3.1. Demographic Characteristics of Sample Population

Variable		Populat			Short-Term n = 10				Long-Term n = 10			
	<u>n</u>	%	x	SD	n	%	<u>x</u>	SD	n	%	x	SD
Age	20	100	42.60	15.99	10	100	35.00	12.67	10	100 5	0.20	14.71
<u>Sex</u> Male Female	2 18	10 90			1 9	10 90			1 9	10 90		
Race Caucasian	20	100			10	100			10	100		
Culture No Ethnic Orienta-												
tion French-	12	60			5	50			7	70		
Canadian	1	5			0	0			1	10		
Italian Other	2 5	10 25			2 3	20 3 0			0 2	0 20		
Income	20	100	24,000	15,779	10	100	26,000	14,456	10	100	22,000	16,763
Education	20	100	11.50	3.24	10	100	10.85	2.68	10	100	12.15	3.61
Employmen Student Unempl'd Retired Unskilled Skilled	1 2 5	5 10 25 45 15			1 1 0 6 2	10 10 0 60 20			0 1 5 3 1	10 10 50 30 10		
Religion Catholic Protest'1 Christian Other		50 15 15 25			5 1 2 3	50 10 20 30			5 2 1 2	50 20 10 20		
Living Arrangemo		10			2	20)		0	0		
First Marriage	5	25			3	20)		2	20		
Married once		5			1	10)		0	0		
Never Married	7	35			3	30)		4	40		
Divorced Seporate Widowed Years in	d 5 2				2	20)		3 2	30 20		
Current tionship	Rela 10		17.20	15.35	7	70	0 12.29	10.13	3	30	28.67	18.91
Number o		25	1.67	0.80	3	3	0 1.67	0.94	2	20	1.50	0.50
Other Deceased Relative Number o	s 20	100	1.65	1.35	10	10	0 0.90	0.83	10	100	2.40	1.36
Signif.l events		100	4.90	2.75	10	10	0 3.70	1.42	10	100	3.70	1.62

that their family income was less than \$20,000, 30% (n = 6) stated their income was between \$20,000 and \$40,000, and 20% (n = 4) noted their annual income to be in excess of \$40,000.

Other demographic information indicated that 25% of the subjects (n = 5) were divorced or separated, 10% (n = 2) were widowed, 30% (n = 6) were married and 35% (n = 7) were never married. In terms of the number of perceived significant events that have happened to them, 15% (n = 3) noted that less than three major life changes have happened and 85% (n = 17) noted that they have experienced three or more significant life events. In reviewing the demographic differences between short- and long-term depressives, the only difference appears to be age (mean of 35.0 and 50.2 years respectively) and age-related characteristics such as the number of years in current relationship (mean of 12.29 and 28.67 years respectively) and the number of deceased relatives (mean of 0.9 and 2.4 respectively).

Table 3.2 presents the diagnostic characteristics of the sample population. This table demonstrates the psychological make-up of the subject population and clearly indicates the difference between long- and short-term depressives on each specific criterion. In terms of length of illness a noticeable difference exists between the mean for short-term subjects (14.7 months) and the long-term subjects (97.2 months). Again the number of depressive episodes and the length of the current episode suggests a

Table 3.2. Diagnostic Characteristics of Sample Population

Variable Populationn = 20					Short-Term n = 10			Long-Term n = 10				
	n	%	x	SD	n	%		SD	n	*	x	SD
DSM-III-(R AXIS/I Adj/Dep ^a Maj/Dep ^b Maj/Dep ^c Maj/Dep ^d Maj/Dep ^e Dysthima	5 4 1 5 2 3	25 20 5 25 10 15			5 4 0 1 0	50 40 0 10 0			0 0 1 4 2 3	0 0 10 40 20 30		
DMS-III-(R AXIS/II None NOS Histr'ic Dependent Obs/Comp	9 5 1 4	45 25 5 20 5			7 1 0 1	70 10 0 10			2 4 1 3 0	20 40 10 30 0		
DMS-III-(I AXIS/III Mjr. Ill. Mld. Ill. No Ill.	1 5 14	5 25 70			1 1 8	10 10 80			0 4 6	0 40 60		
DMS-III-(AXIS/IV Acute Enduring	R): 8 12	40 70	4.00 3.92	0.71 0.95	8 2	80 20	4.00	0.71 0.00	0 10	0 100	3.70	0.90
DMS-III-(AXIS/V Current ⁹ Ovr 1 yr ⁹	20	100 100	47.90 66.75	11.55 9.40	10 10	100 100	52.80 73.50	6.52 7.10	10 10	100 100	43.00 60.00	13.27 5.92
Length of Illness	20	100	55.95	63.55	10	100	14.70	35.13	10	100	97.20	58.65
No. of	20	100	3.85	4.79	10	100	1.30	0.90	10	100	6.40	5.64
Frequency (Months)	^h 20	100	6.1	10.05	10	100	3.00	9.00	10	100	9.20	10.09
Time bety current a last ^h (Months)		100	4.05	8.24	10	100	3.60	10.80	10	100	4.50	4.34
Length of currenth (Months)	f 20	100	15.90	28.45	10	100	2.90	1.45	10	100	28.90	35.70
General funct'in		of 100	65.25	10.06	10	100	73.00	7.81	10	100	57.50	4.6
Beck Dep Inventor		n 100	24.70	10.55	10	100	26.00	10.88	10		23.40	10.0

Adjustment disorder with depression bajor depression; single episode; moderate capacity depression; recurrent; moderate bajor depression; recurrent; bajor depression; bajor depression; recurrent; bajor depression; bajor depression;

major difference between long- and short-term depressives.

The number of depressive episodes for short-term subjects

was an average of 1.3, while for long-term depressives the

average was 6.4. Similarly, the length of episodes was also

different. For short-term patients, an average episode

lasted 2.9 months while for long-term depressives the

average duration of an episode was 28.9 months.

Together, the demographic and diagnostic characteristics of this group describe an inpatient population that typifies a depressed clientele generally found in the hospital's inpatient psychiatric unit.

Composition and Training of Research Team

A research team was recruited to assist with this project. The composition and tasks of this team are outlined below:

- 1. Primary Researcher (M.A.)
 - a. Overall Coordinator
 - b. Interviewer
 - c. Rater of interviews not conducted
- 2. Dissertation Chairperson (Ed.D.)
 - a. Advisor
 - b. Rater of interviews
- Outpatient Psychotherapist (M.S.W./C.I.S.W.)
 - a. Interviewer
 - b. Rater of interviews not conducted
- 4. Board-Certified Psychiatrists (4) (M.D.)
 a. Diagnosticians for patients under their care
- 5. Inpatient Clinical Social Workers (2) (M.S.W./C.I.S.W.)
 - a. Referral coordinators
 - b. Data collectors

- 6. Medical Transcriptionist a. Transcriber of interviews
- 7. Word Processing Professional a. Back-up transcriber

All members of the research team had been introduced to the study and trained as to their designated tasks. A small pilot study provided an actual training period. This was followed by several meetings to answer questions and revise procedures. More specialized training and supervision was provided to the second interviewer and rater, including didactic instruction, readings, observation of primary researcher completing an interview, role play practice, observed practice with supervisory feedback, and practice rating with supervisory feedback. She was also provided with a rating training manual (Ivey & Rigazio-DiGilio, 1987) and with copies of each revision of the interview format. Prior to the rating of research interviews, the three raters practiced rating transcribed interviews until an 85% interrater reliability was consistently achieved for both the assessment phase and the treatment phase of the interview. Also, separate training was provided to the medical transcriptionist in terms of how to edit the specific interview categories for rating. Finally all clinical and support personnel directly serving the sample population were acquainted with the project and with standard responses to offer should patients ask questions pertinent to the study (e.g., referring patient to primary researcher).

Instrumentation

The following section briefly describes the six instruments used in this study.

The Beck Depression Inventory

The Beck Depression Inventory (BDI) is a clinically derived, self-report, multiple-choice inventory which purports to estimate the presence and degree of depression in adolescents and adults, independent of any particular theoretical bias. It was used to review the degree of depression for each patient. Each of the 21 items correspond to a specific category of symptoms and attitudes assumed to be a behavioral manifestation of depression (Beck, 1970). Each item consists of a graded series of self-evaluative statements which are rank-ordered and weighted to reflect the range and severity of the symptom, from neutral (zero) to severe (three).

The range of possible scores on the BDI extends from 0 to 63, with scores of 0 to 9 being categorized by Beck as not depressed, 10-15 as mildly depressed, 16-19 as mild-moderately depressed, 20-29 as moderate-severely depressed, and 30-63 severely depressed. Beck is careful to state that these numbers are only guidelines to be used to estimate the severity of depression, not to classify or diagnose individuals as depressed or not depressed.

The overall results of reliability and validity studies strongly support the BDI as a very useful clinical and

empirical measure for assessing depression and firmly support its use as a screening and supplementary devise for assessing depression in both clinical and empirical contexts. This has been well documented with a variety of subjects in a variety of situations encompassing reliability scores ranging from .85 to .93 and validity scores of .65 to .77 (eg., Beck, 1970; Beck & Beamesdefer, 1974; Beck, Ward, Mendelson, Mack, & Erbaugh, 1961; Bumberry, Oliver, & McClure, 1978; Reynolds & Gould, 1981).

The Diagnostic Criteria/DSM-III-(R) Form

This form was designed to outline the diagnostic

criteria that will be used to determine patient selection.

(see Appendix F).

The Patient Identification Sheet

This sheet was designed to provide potential

interviewers with salient identifying data regarding the

patient so that anonymity can be determined (see Appendix

G).

The Family Information Sheet

This sheet was designed for the purpose of collecting data regarding major demographic variables and significant family and psychiatric history data (see Appendix H).

Introduction to the SCDI

This sub-section describes the design, purpose, and construction of the SCDI: an interview designed to elicit verbalizations from patients in response to a standard series of questions and listening strategies aimed at accessing a patient's predominant cognitive-developmental level in relation to a specific topic and at promoting patient movement through a sequential series of eight cognitive-developmental levels (See Appendix D).

Design and Purpose of the SCDI

The SCDI is divided into two interview phases. The first is an assessment phase based on the patient's view of some aspect of her or his family. The purpose of this phase is to elicit enough data (approximately 50-100 words that are minimally influenced by the interviewer), to be able to reliably determine the patient's predominant cognitive-developmental level in relation to the specific topic: basically, to see how the patient conceptualizes the issue she or he chooses to present.

The assessment phase is followed by a <u>treatment phase</u> designed to facilitate the patient's movement sequentially through the eight levels of cognitive-development. In order to accomplish this, each cognitive-development level is represented by a standard series of questions designed to

elicit patient verbalizations indicative of that level. The overall objective is to assist the patient to examine the chosen issue from a wide variety of cognitive points of view.

Administration of the SCDI

Throughout the interview process, the Interviewer followed a standard format of questioning, deviating only in her use of Ivey's Basic Listening Sequence (1971, 1983) in order to elicit further data or to clarify. For the assessment phase, the interviewer presented a family focused question in an open-ended format, encouraging verbal response through Ivey's Basic Listening Sequence. Once 50-100 words were elicited from the patient, the treatment phase began by summarizing this response given by the patient in the assessment phase. The interviewer then asked eight sequential sets of standard questions aimed at eliciting data representative of each cognitivedevelopmental level. The resultant data included:

- An assessment phase dialogue that was used to determine if it is possible to reliably classify a patient's predominant cognitive-developmental level in relation to her or his chosen family issue.
- 2) Eight sections of patient verbalizations (with clinician questions deleted) that were used to determine if it is possible to reliably classify the specific cognitive-developmental level predominantly reflected in each section; basically, to determine if a standard series of questions designed to promote a specific cognitive-developmental level of responses in

effect facilitates the predicted level in a way that can be reliably rated.

Construction of the SCDI

In <u>Developmental Therapy: Theory into Practice</u>, Ivey (1986) presented a list of highly specific questioning techniques and listening strategies designed to access a patient's predominant cognitive-developmental level and to promote patient movement through the eight levels of cognitive development (See Appendix C). Ivey had found these strategies particulary useful in therapy. Each set of questions, used in conjunction with basic listening skills, seemed to lead to predictable patient responses that changed the patient's mode of processing concerns in therapy. The SCDI originated from this list, and from Ivey's methodological suggestions for how to apply Developmental Theory directly to the therapeutic process.

The latest revision by Ivey, Rigazio-DiGilio, and Ivey (1987) was based on clinical and empirical experience with the interview and the companion classification system (eg., a pilot study with a small group of patients fitting the selection criteria for this study; a group of master and doctoral level students registered for a course on Developmental Therapy) and on feedback received from students, professors, and colleagues. This revision emphasized streamlining the standard series of questioning strategies, specifying question content specifically related

to the target population and the purpose of the study, checking for clarity, and checking for applicability to research intent.

The Standard Cognitive-Developmental Classification System

Introduction to the SCDCS

This sub-section describes the design, purpose, and construction of the SCDCS: a classification system that can be used to rate a patient's predominant cognitive-developmental level during the assessment phase of the SCDI, and a patient's specific level of cognitive-development throughout the eight intervention sections of the SCDI (See Appendix E).

Design and Purpose of the SCDCS

The SCDCS is an instrument designed to classify the salient dimensions of the cognitive-developmental levels posited by Ivey into empirically measurable indicators for the purpose of ensuring verifiability of the operationalized construct in all its levels. It categorizes four main dimensions of cognitive-development (e.g., sensorimotor/elemental, concrete operational/situational, formal operational/pattern, and dialectic/transformation/integration) and further sub-divides each dimension into early and late level indicators. The SCDCS was designed to measure the underlying structure of a patient's thinking

process as manifest in her or his natural language. As such, ratings of cognitive-developmental levels are based on verbal responses derived from the questioning and listening strategies detailed in the SCDI.

Rating Procedures for the SCDCS

Initial predominant cognitive-developmental levels were measured by rating a patient's verbalizations about the specific topic addressed in the assessment phase of the SCDI on a four-point classification schema which collapses the eight sub-divisions into the original four main dimensions of cognitive-development. Each rater received a transcript of the assessment phase in order to accomplish this. Two methods of rating were used to determine the predominant cognitive-developmental level based on this four-point classification system:

METHOD ONE - THE NUMERICAL SCORING PROCEDURE

The two raters classified each patient statement using the SCDCS criteria. This initial step in the Numerical method was identified as a statement by statement scoring procedure. The predominant cognitive-developmental level was then computed by determining the percentages of patient statements found in each of the four cognitive-developmental categories. The category with the highest percentage of statements was considered the PCDL. This method is in the tradition of Ivey's Microcounseling (1983) in that each specific response is rated (Ivey, however, rated single interviewer responses.).

METHOD TWO - THE HOLISTIC SCORING PROCEDURE

The two raters completed a scoring that was holistic in nature. Each had the above data available to them, and added overall subjective clinical expertise to produce a more holistic impression. This type of rating is in the tradition of the classic methods used by Carkhuff

(1969) when he classified sections of interviews for interviewing style.

The level of cognitive-development reflected in the patient's verbalizations throughout the eight sections of the treatment phase was classified by rating her or his responses within each cognitive-developmental section of the interview on an eight-point scale based on all of the subdivisions of the SCDCS. In order to accomplish this, each rater received transcripts of the patient's responses for each cognitive-developmental level, unlabeled and randomized. The rater used the second method of rating described above to holistically determine the predominant cognitive-developmental level identified in each section based on the eight-point scale. (Clinical and training experience with pre-tests of the classification system revealed that inter-rater reliability and inter-rater agreement can be obtained in both the Ivey and Carkhoff systems. Therefore, given the complexity of the study, the amount of data, the cumbersome nature of rating each patient statement separately, the economic cost-benefit ratios, and, more importantly, the distortion that occurs when patient statements are taken out of context, it was decided to use only this holistic scoring procedure in the rating of the treatment phase of the interview.) The purpose was to determine whether or not the specified questions and listening strategies detailed in the SCDI led to verbal

responses that were both measurable and indicative of predicted cognitive-developmental levels.

Construction of the SCDCS

In <u>Developmental Therapy: Theory into Practice</u>, Ivey (1986) defines basic Piagetian constructs as they might appear analogically in adult clients and he offers definitions of these constructs (see Appendix A).

Basically, Ivey accomplishes this by operationalizing metaphors of Piagetian sensori-motor, pre-operational, concrete operational, and formal operational thinking into cognitive-developmental constructs. He further expands this construct by adding the dimension of dialectic thinking.

Appendix C and Appendix A, as presented by Ivey, are based on this operationalization of predominant cognitive-developmental levels and offer empirical guidelines for conceptualizing and researching the empirical reality of this construct.

The SCDCS originated from these highly specific empirical guidelines. The primary intent was to ensure the verifiability of the cognitive-developmental construct by defining each level in a way that is clearly and consensually understood. The practical purpose was to develop a classification system that allowed clinicians and researchers to reliably rate cognitive-developmental levels by examining patient verbalizations against a standard classification system. Because clinical judgement is

exercised in the ratings, every effort was made to develop a classification system with precise and clear anchoring definitions that conveyed the essence of each sub-division.

The original SCDCS consisted of two scoring systems: one for rating the predominant cognitive-developmental level of the patient during the assessment phase and one for rating the specific levels of cognitive-development that were reached during the treatment phase. An original scale was submitted to Dr. Ivey who circulated it among colleagues and advanced graduate students for feedback. It was also used in the pilot study, in a graduate class, and for completing several types of blind ratings. The combination of experience and feedback resulted in the final product (Ivey & Rigazio-DiGilio, 1988).

Research Design and Data Collection

As mentioned, participants for this study were recruited from the Bristol Hospital Psychiatric Inpatient Unit. Procedures for selection were completed within one to three days of hospitalization and were based on three areas of eligibility: diagnosis, anonymity, and consent.

The social worker, in consultation with the case psychiatrist, completed the Diagnostic Criteria/DSM-III-(R) Form (see Appendix F) and compared the resultant data against the standard diagnostic criteria to determine if all the inclusionary and exclusionary requirements had been satisfied. Final review and approval of the form and the

patient was the responsibility of the case psychiatrist. If the patient met the diagnostic criteria and was approved by the psychiatrist, the social worker completed and forwarded a Patient Identification Sheet (see Appendix G) to the interviewers who examined the identifying data to determine if anonymity criteria were satisfied. Continued eligibility required that at least one of the interviewers had no previous history with or knowledge of the patient or of her or his significant relations, as best could be determined. If this requirement was met, the social worker scheduled an appointment with the patient to explain the nature of the study and the type and extent of participation required. The social worker also reviewed the Consent to Participate Form (see Appendix I) with the patient. If the patient agreed to participate, the social worker obtained her or his signature on this consent form.

During this first meeting, the patient was also asked to complete the Beck Depression Inventory, either manually or, if unable, in dialogue with the social worker who recorded the responses. The Family Information Sheet (see Appendix H) was then described to the patient with directions to complete and return within a twenty-four hour period. Again responses were recorded in dialogue with the patient if self-completion was impossible.

Interviewer assignments were randomly designated except when the anonymity standard would not be maintained by this assignment process. The only information made available to

the assigned interviewer was a copy of the Family
Information Sheet with the subject's medical, psychiatric,
educational, and substance history deleted. It should be
noted here that both the anonymity requirement and the
standardization of the type of information made available to
the interviewer prior to the completion of all ratings were
included in an attempt to establish a standard level of
descriptive data that could be utilized by the interviewer
and in an attempt to minimize the potential effects of
interviewer bias and patient/interviewer familiarity.

Interviews were scheduled to occur within four to seven days of hospitalization. Patients participated in a 45-minute to one hour audio-taped structured interview based on the SCDI. The interview process was described in the "Instrumentation" section and is outlined in detail in Appendix D. Following the interview, all patients were afforded the opportunity to ask questions or make comments pertaining to the study. This concluded the patient's participation in the study.

Audio-taped interviews were transcribed in entirety by a medical transcriptionist fully acquainted with the ethics and legalities of her occupation. She substituted any identifying names with the designated family or relationship role. Also, if the transcriptionist determined that she could identify the patient or her or his significant relations, she would not complete the transcription. A

back-up transcriptionist was identified to complete the process should this problem arise.

Once audio tapes had been transferred to typescript form, the transcriptionist prepared the following interview formats:

- 1. The complete interview
- Interviewer and patient dialogue pertaining to the assessment phase and labeled as such (e.g., Assessment Phase)
- 3. Patient statements related to the different cognitive-developmental levels. These sections will be separated, unlabeled, randomized, and coded. (e.g., Intervention Section A)

The transcriptionist provided the primary researcher with two copies of the assessment phase dialogue and the eight intervention sections which had all clinician statements deleted. These forms were independently rated. It should be noted that the deletion of clinician statements was meant to ensure that the ratings were not biased based on knowledge of the specific questioning strategies used within each section. The strategies for each cognitive-developmental level are readily identifiable and would therefore have influenced the judgement of the raters.

The primary researcher, the dissertation chairperson, and the outpatient psychotherapist served as the raters of the interviews. The dissertation chairperson independently rated each interview whereas the primary researcher and the outpatient psychotherapist rated only those interviews they did not conduct themselves. In this way, each interview received two independent ratings.

Basically, each rater independently scored the interviews using the Standard Cognitive-Developmental Classification System:

- 1. The assessment phase was rated as to the predominant cognitive-developmental level represented by patient responses to the opening questions of the interview. These levels were determined by rating patient verbalizations based on the four-point classification system defined in the Instrumentation section and described in detail in Appendix E. The actual rating procedures are described in the Instrumentation and Statistical Analysis sections of this chapter.
- The eight intervention sections were rated as to the specific level of cognitive-development represented by patient responses to interviewer questions. These levels were determined by rating each of the eight coded sections based on the eight-point classification system defined in the Instrumentation section and described in detail in Appendix E. The actual rating procedures are described in the Instrumentation and Statistical Analysis sections of this chapter.

After independent classifications had been recorded, the two raters reached consensus as to the cognitive-developmental level represented in the assessment phase and in the eight intervention sections of the treatment phase that were classified dissimilarly. In this way each section was labeled by two specified classifications, one derived at by independent ratings and the other derived at by negotiated ratings. These two types of ratings served as the basis of the predictive analysis and as the data for hypothesis four.

Statistical Analysis

A description of the methods of data analyzation specific to each hypothesis will be presented in this section. For the purpose of clarity, each hypothesis will be restated before the procedures associated with its investigation are defined.

Tinsley and Weiss (1975) strongly advocate the reporting of inter-rater reliability when classification scales are employed in psychological research. Reliability investigations of this nature offer a form of consensual validation of the reliability of the scale. The first two hypotheses made use of such inter-rater reliability measures to determine if the standard interview could be rated reliably using the companion classification system derived from Developmental Therapy Theory.

H₁) An inter-rater reliability of .85 (or better) can be computed for the PCDL of patient statements during the assessment phase of the Standard Cognitive-Developmental Interview.

The assessment phase of the SCDI was designed to operationalize the procedures for an initial interview so as to determine if one could reliably identify the predominant level represented in a patient's presentation of her or his issue with minimal influence from the interviewer. Two alternative tests were employed to accomplish this:

1. As a first operational test of the hypothesis, the two raters classified each patient statement using the SCDCS criteria. The predominant cognitive-developmental level was then computed by determining the percentages of patient statements in each of the four cognitive-developmental

categories. The category with the highest percentage of statements was determined to be the PCDL in this numerical scoring procedure. Both inter-rater reliability and inter-rater agreement were calculated.

A second operational test of the hypothesis was holistic in nature. The raters had the above data available to them and added overall subjective clinical expertise to produce a more holistic impression. Again, both inter-rater reliability and inter-rater agreement were calculated.

What was important was that the two raters independently agreed in both operational tests as to each patient's predominant cognitive-developmental level. Interrater reliability was measured using the Pearson product moment correlation coefficient, and inter-rater agreement was measured using percentages. An overall coefficient of .85 or percentage of 85 was considered statistically significant for both rating procedures.

The second hypothesis determined whether or not it was possible to reliably identify the cognitive-developmental level represented by patient verbalizations in each of the eight intervention sections that occur during the treatment phase of the SCDI.

H₂) An inter-rater reliability of .85 (or better) can be computed for the cognitive-developmental level of patient statements during the eight intervention sections within the treatment phase of the Standard Cognitive-Developmental Interview.

For hypothesis two, the objective was for each rater to determine which cognitive-developmental category was most significantly represented in each section. As previously stated, the operational test of this hypothesis was holistic

in nature. Each rater used her or his overall subjective clinical expertise to produce a holistic impression of each intervention section.

What was again important was that the two raters independently agreed as to the cognitive-developmental subdivision most significantly represented in each section.

Inter-rater reliability was measured with the Pearson product moment correlation coefficient and inter-rater agreement was also calculated. An overall coefficient of .85 or percentage of 85 was considered statistically significant.

The third hypothesis made use of Decision Theory's "hit rate" concept to determine whether or not the underlying premise upon which Developmental Therapy is based can be demonstrated empirically; that a patient can be directed to talk about their issues at varying levels of cognitive-development by utilizing questioning strategies indicative of these levels. The critical issue was whether or not the questions oriented to promote patient verbalization at a particular level of developmental cognition actually access measurable verbalizations indicative of that level. The research question was one of cause and effect.

H₃) Patients who are asked a standard series of intervention questions at each level of developmental cognition will respond with a set of verbalizations indicative of that level.

Data gathered for hypothesis two were used to analyze hypothesis three. Two methods of analyzation were employed:

non-negotiated response analysis and negotiated response analysis. In the first type, there was no attempt to reconcile differences between raters. Instead, differences were rated as "non-hits". Those sections of the treatment phase which were both identically scored by raters and positively correlated to the intervening set of questions designed to promote such a rating were considered to be "positive hits". In the second type of analyzation, dissimilarly rated sections were reviewed by the raters and a negotiated score was determined. In this way each of the treatment sections for each patient were identified by a single consensual rating. Those ratings that positively correlated with the intervening set of questions designed to promote such ratings were considered "positive hits".

Both the non-negotiated rating analysis and the negotiated rating analysis were statistically treated using the following three procedures:

1. Overall Hit Rate = <u>number of valid responses overall</u> total number of intervention sections (160)

This statistic will determine if patients actually respond to interviewer questioning as predicted by Developmental Therapy. Specifically, if questions asked from the SCDI at varying levels actual promote patient response indicative of each level.

2. Sub-Division Hit Rate = number of valid responses in specific sub-division total number of patients (20)

This statistic will determine if patients respond as predicted for each cognitive-developmental subdivision. Specifically, if the questions for each sub-division promote patient responses indicative of that particular sub-division.

3. Patient Hit Rate = <u>number of valid responses during treatment phase of SCDI</u> total number of intervention sections in the SCDI (8)

This statistic will determine if each patient responds as predicted by Developmental Therapy for each sub-division and throughout the interview.

The overall "positive hit rate" determined if predictive validity was supported.

The review of the literature concerning a depressives cognitive functioning suggests that long-term and short-term depressives should significantly differ in both predominant cognitive-developmental style and cognitive-developmental movement. This assumed difference provided the foundation for the last two hypotheses:

H₄) The PCDL of short-term depressives during the assessment phase of the standard interview will be classified at a higher level than that of long-term depressives.

The independent scores established for each patient on the assessment phase of the interview served as the data to examine hypothesis four. As was done for each section of the treatment phase, raters negotiated a score for any patients they did not previously agree upon so that all twenty typescripts were identified by one consensual rating (independent or negotiated). The degree of association between the predominant cognitive-developmental levels of long-and short-term depressives was then examined by the Student's t-test for significant difference.

The final hypothesis centered on whether or not shortterm depressives responded more predictably to the questioning procedures designed to move people through cognitive-developmental levels than did long-term depressives. Hypothesis five was meant to determine whether the difference assumed to exist was statistically significant:

H₅) Short term depressives will follow the predictions of hypothesis three more often than long-term depressives.

In order to investigate this hypothesis, the data generated for hypothesis two was subdivided into short-term and long-term depressive categories. In this format, the same three analyzations calculated for hypothesis three were computed for each group of depressives—Overall hit rate, sub-division hit rate and subject hit rate. Once these statistics were calculated, t-tests were employed to examine possible differences.

CHAPTER IV

RESULTS AND DISCUSSION

Introduction

The objective of this study was to investigate the reliability of the cognitive-developmental classifications derived from Ivey's Developmental Theory and the predictive validity of the intervention strategies designed in accordance with this therapeutic model.

Several hypotheses were developed to address the questions -- "Can the cognitive-developmental level of patients be assessed reliably?" and "If a clinician asks a specific set of questions aimed at eliciting patient verbalizations at varying cognitive-developmental levels, do patients respond at the predicted levels?".

The specific population of this study being inpatient depressives raised two further questions -- "Do long-term and short-term depressives vary in their predominant cognitive-developmental levels?" and "Do short-term depressives display a greater cognitive flexibility than long-term depressives?".

In this chapter, the results of the data generated by each hypothesis will be presented, analyzed, and evaluated.

The meaning of these results in terms of the focus questions will be detailed in the discussion section of this chapter.

Results and Findings

The following section will detail the results of the research and will outline the findings related to these outcomes. The results and findings of each hypotheses will be explained separately.

Hypothesis 1: Results

H1) An inter-rater reliability of .85 (or better) can be computed for the PCDL of patient statements during the assessment phase of the Standard Cognitive Developmental Interview.

This hypothesis was tested by determining the interrater agreement and the Pearson product moment correlation
coefficient for each set of co-raters and for the combined
total results. The diagnostic responses for each of the
twenty patients were coded by two raters and subjected to
the above statistical analyses by methods of holistic,
statement by statement, and numerical scoring.

Table 4.1 indicates that for holistic scores, raters one and two had an overall agreement of 80% and an interrater reliability of .78. Raters one and three had an interrater agreement of 90% and a .92 interrater reliability. Combined, the interrater agreement for both teams was .85 with a reliability index of .87 for holistic scoring methods.

Table 4.1. Hypothesis One: Holistic Rating Analyses

RATER TEAMS	INTER-RATER AGREEMENT	INTER-RATER RELIABILITY
RATER 1 AND RATER 2	.80	.78
RATER 1 AND RATER 3	.90	.92
TOTAL	.85	.87

Each patient's opening response was also classified with a statement by statement procedure. The results of this analysis are presented in Table 4.2. Here the level of agreement and corresponding reliability values for team one and two are 86% with an r of .60, and 76% with an r of .78 respectively. Together, the statement by statement scoring procedure produced an inter-rater agreement of 82% and a correlational coefficient of .71.

Finally, the diagnostic phase of the interview was also analyzed by means of a numerical scoring procedure. Here each patient's statements were coded into grouped categories. The category with the highest percent of statements was designated as the predominant cognitive-developmental level. The data generated from this procedure are displayed in Table 4.3. Here the inter-rater agreement for raters one and two was 100% with a positive correlation of 1.0. Raters one and three scored 80% inter-rater

Table 4.2. Hypothesis One: Statement by Statement Rating Analyses

RATER TEAMS	INTER-RATER AGREEMENT	INTER-RATER RELIABILITY
RATER 1 AND RATER 2	.86	.60
RATER 1 AND RATER 3	.76	.78
TOTAL	.85	.87

(*N/A ratings, conjointly or individually determined were not included in the above statistical analysis.)

agreement and a reliability factor of .86. The total interrater agreement and reliability score for this analysis was 90% and .90 respectively.

Table 4.3. Hypothesis One: Numerical Rating Analyses

RATER TEAMS	INTER-RATER AGREEMENT	INTER-RATER RELIABILITY
RATER 1 AND RATER 2	1.00	1.00
RATER 1 AND RATER 3	.80	.86
TOTAL	.90	.90

Hypothesis 1: Findings

The results of these findings confirm hypothesis one.

It is possible to accurately assess the predominant cognitive-developmental level of a patient using the natural linguistic patterns of the patient. It is important to note that every patient is a mixture of many developmental levels and that specific topics or areas of concern will be associated with typical patterns of cognitive style. This research identifies the PCDL of patients as verified through their verbalizations about their families.

The three analyses further indicate that two methods, the holistic and numerical approaches, possess high degrees of accuracy. The lower agreement and reliability factors revealed by the statement by statement scoring method suggests that cognitive-developmental levels are best discerned at the holistic rather than the statement level. One reason for this may be the use of ambiguous connecting sentences that tie thoughts together to create a whole image or impression. When isolated, these sentences may be misclassified or so ambiguous that they are unclassifiable. This finding reinforces the role of context in assessing the predominant cognitive-developmental level represented in a patient's verbalizations about a specific topic. individual statement makes sense only in relation to preceding and subsequent statements. In isolation, statements can be misinterpreted and/or meaningless and thus, provide poor material from which to accurately

diagnose a patient's cognitive level of overall functioning in relation to a particular focus of concern.

On the other hand, the holistic and numerical methods proved to be very effective measures of defining the predominant cognitive-developmental level represented in a patient's verbalizations about her or his family. Both scoring procedures rely on whole thoughts, concepts, and ideas. In the holistic method, an overall clinical impression is discerned and in the numerical method, whole levels of cognitive-development are identified. In both, the context is the critical factor in determining both clinical meaning and level.

In addition to confirming hypothesis one, the results of these analyses also indicate that the content validity of Ivey's cognitive-developmental levels has received initial positive support. This may suggest that the terminology of Developmental Theory can be taught to clinicians and clinicians-in-training and can be used in clinical settings to assess a patient's predominant cognitive-developmental level in reference to a specific issue or presenting problem at the beginning of a therapeutic relationship. This knowledge may assist clinicians in defining, designing, and initiating treatment interventions that are more isomorphic with the patient's prevailing cognitive style.

Hypothesis 2: Results

H2) An inter-rater reliability of .85 (or better) can be computed for the cognitive-developmental level of patient statements during the eight intervention sections within the treatment phase of the Standard Cognitive Developmental Interview.

This hypothesis was tested by analyzing the response, in a holistic fashion, of all twenty patients to specific questions designed to elicit statements at each of the eight cognitive-developmental levels. Table 4.4 presents the data for all patients in terms of inter-rater agreement and inter-rater reliability. This chart indicates that for both rater teams, there is high agreement as to the response level of each patient. The 89% level of agreement and the .98 reliability coefficient indicates that at each level of the cognitive-developmental scale, the raters were able to concur as to the functioning-during-the-interview response level of each patient.

Table 4.4. Hypothesis Two: Treatment Phase Analyses of Coraters

RATER TEAMS	INTER-RATER AGREEMENT	INTER-RATER RELIABILITY
RATER 1 AND RATER 2	.90	.98
RATER 1 AND RATER 3	.88	.97
TOTAL	.89	.98

This material was also analyzed in terms of short-term and long-term depressives. Table 4.5 presents the findings of this analysis. The holistic scoring method used during this procedure was more sensitive to the short-term depressives as opposed to the long-term patients. However, both inter-rater agreements are at or above the 85% level and demonstrate that raters can identify the response levels of both groups with a high degree of accuracy and strong consistency as indicated by the reliability coefficients of .96 and .99.

Table 4.5. Hypothesis Two: Treatment Phase Analyses of Diagnostic Categories

RATER TEAMS	INTER-RATER AGREEMENT	INTER-RATER RELIABILITY
RATER 1 AND RATER 2	.85	.96
RATER 1 AND RATER 3	.93	.99
TOTAL	.89	.98

The inter-rater agreement for each cognitivedevelopmental category is presented in Table 4.6. Reviewing
the total scoring for each category, the results indicate
that the categories of early and late sensori-motor
operations are the easiest to reach agreement about, while
early concrete and early formal types of responses are the

Table 4.6. Hypothesis Two: Treatment Phase Analysis of Cognitive-Developmental Categories

RATER TEAMS	COGNITIVE DEVELOPMENTAL CATEGORIES INTER-RATER AGREEMENT							
	ES	LS	EC	LC	EF	LF	ED	LD
RATER 1/RATER 2	1.0	1.0	.9	. 9	1.0	. 8	.8	. 8
RATER 1/RATER 3	1.0	1.0	.7	.9	.6	.9	1.0	1.0
TOTAL	1.0	1.0	.8	.9	.8	.85	.9	.9

most difficult to identify and reach agreement about. The data also indicate that all the categories were agreed to with an 80% or better rating, with six of the eight categories receiving an 85% or better inter-rater agreement.

Hypothesis 2: Findings

The results of the holistic measure provides strong substantiation of hypothesis two. The findings suggest that the SCDI elicits movement throughout the cognitive-developmental range. The overall reliability factor of .98 is very strong and provides preliminary evidence that the eight stages can be stimulated and differentiated by skillful questioning and observation techniques. This data reinforce the appropriateness of Ivey's constructs and the

vocabulary which is used to describe the eight cognitivedevelopmental levels.

The overall rating broken down by diagnosis reveals a slight difference between the long- and short-term depressive. The inter-rater reliability for both groups is again very strong which suggests that both groups can be accurately classified within eight cognitive levels. This reflects the ability of the SCDI to elicit and identify patient movement across the cognitive-developmental levels.

Further analysis of this data indicates that all eight categories are discernible at an inter-rater agreement level of at least 80%. The categories at the extreme ends of the cognitive scale received the highest levels of agreement. One reason for this may be that the style of cognition is substantially different at these levels while the transition points between the middle cognitive levels may not be as clear.

Specifically, in regards to the inter-rater agreement of 80% for the early concrete and early formal levels, both describe concrete details of situations. The early concrete phase focuses in on descriptions of a situation and the early formal level focuses on a description of a similar situation. Clearly, vocabulary and phraseology would be similar and could therefore account for the lower percentages represented by the scores.

In contrast, the other six categories all received inter-rater agreements of 85% or better and this

indicates that the levels can be accurately and consistently identified. These initial data suggest that the eight categories can be classified using linguistic coding approaches and that both long-term and short-term depressives can move through the eight levels. The results of this hypothesis provide further support for the content validity of Ivey's eight cognitive-developmental levels.

Hypothesis 3: Results

H3) Patients who are asked a standard series of intervention questions at each level of developmental cognition will respond with a set of verbalizations indicative of that level.

This hypothesis seeks to determine the predictive validity of the SCDI. Two analyses were conducted on the data generated for this hypothesis. The first analysis was an overall hit rate. Simply put, this measures the percentage of non-negotiated, independently agreed upon responses, and negotiated responses that correspond to the cognitive-developmental level of stimulus questions. These two types of responses were analyzed separately.

The second analysis was performed to subdivide the hit rate according to each of the eight categories. This was computed by dividing the valid non-negotiated and valid negotiated responses in each specific category by the N of 20. Tables 4.7 and 4.8 present the analysis of data for these two procedures.

Table 4.7. Hypothesis Three: Cognitive-Developmental Category and Overall Hit Rate Analyses -- Non-negotiated Scores

COGNITIVE-DEVELOPMENTAL CATEGORY	HIT RATE*
EARLY SENSORI-MOTOR	100%
LATE SENSORI-MOTOR	100%
EARLY CONCRETE	80%
LATE CONCRETE	85%
EARLY FORMAL	80%
LATE FORMAL	85%
EARLY DIALECTIC	90%
LATE DIALECTIC	90%
OVERALL	89%

*HIT RATE = the number of verifiable, nonnegotiated, independently agreed upon ratings for patient responses.

Table 4.8. Hypothesis Three: Cognitive-Developmental Category and Overall Hit Rate Analyses -- Negotiated Scores

COGNITIVE-DEVELOPMENTAL CATEGORY	HIT RATE*
EARLY SENSORI-MOTOR	100%
LATE SENSORI-MOTOR	100%
EARLY CONCRETE	95%
LATE CONCRETE	95%
EARLY FORMAL	100%
LATE FORMAL	100%
EARLY DIALECTIC	100%
LATE DIALECTIC	100%
OVERALL	99%

*HIT RATE = the number of verifiable responses utilizing both independently agreed upon ratings and negotiated ratings for patient responses.

For the valid non-negotiated scores, the overall hit rate was 89% which indicates that a high degree of predictability is evident in the SCDI. These composite scores are broken down into the eight levels. The data generated by these scores indicate that the early concrete and early formal levels of patient verbalizations were generated at an 80% effectiveness rate given the questioning strategies of the SCDI. All other cognitive-developmental levels were stimulated in an verifiable way at least 85% of the time by the corresponding questions of the SCDI. Questions involved with the sensori-motor level achieved a predictability level of 100%.

The results of the valid negotiated scores are even more promising. The overall hit rate when computed using this method was at the 99% level. Only two areas were at the 95% level (early concrete and late concrete), all other areas were at the 100% mark, thus indicating a strong ability to generate high degrees of predictability for all eight areas of the cognitive-developmental categories.

Hypothesis 3: Findings

The data generated by the overall hit rates strongly support the predictive validity of the SCDI as stated in hypothesis three. This indicates that patients can in fact respond at various levels of cognitive-development with verifiable language given appropriate questioning techniques.

The specific examination of the lowest scores indicate that further refinement of the SCDI may be needed in the areas of early concrete operations and early formal thinking. All other areas are more than satisfactory and present strong evidence that patients can use cognitive skills at the more complex levels of intellectual functioning.

depressed population, a group noted for its constricted cognitive ability, the data are strong indicators of the powerful nature of the predictive validity of the SCDI to stimulate a wide range of cognitive functioning. The depressed population, due to its malady, does not produce a great many cognitive statements, and the preliminary results generated from this hypothesis suggests that depressives can be stimulated to move toward more complex levels of thinking. From this finding, we can conclude that the SCDI assists depressed patients to view their problems from each of the eight cognitive-developmental perspectives.

It is cautioned that these findings not be interpreted to mean that permanent cognitive changes have taken place but rather that the patient is able to respond at the expected level of each set of questioning strategies. These findings therefore reflect cognitive movement, not cognitive shifts.

Hypothesis 4: Results

H4) The predominant cognitive-developmental level of short-term depressives during the assessment phase of the standard interview will be classified at a higher level than that of long-term depressives.

This hypothesis seeks to determine what difference exists, if any, between short- and long-term depressives in terms of their predominant cognitive-developmental level, specifically in relation to the initial topic area. Using data generated for hypothesis one, the results, which include 18 independently agreed upon and two negotiated scores, were divided into two categories based on the diagnosis of each subject. Patients were identified as either short- or long-term depressives. Table 4.9 displays the findings of this analysis. The differences between the two groups were subjected to a t-test for significance. As indicated in the table, a significant difference between the two groups did not exist.

The data also indicate that the majority, eleven subjects or 55% of the patients, either short- or long-term, were functioning at the concrete stage of operations, six patients or 30% at the formal level, and three patients or 15% at the sensori-motor level.

Hypothesis 4: Findings

This data supports the null hypothesis. There is not a significant difference in the cognitive functioning of long-and short-term depressives within the parameters of this

Table 4.9. Hypothesis Four: Assessment Phase Analysis by Diagnostic Groups

STANDARD DEVIATION	.63	.63
MEAN	2	2.3
DIALECTIC	0	0
FORMAL	2	4
CONCRETE	6	5
SENSORI-MOTOR	2	1
COGNITIVE-DEVELOPMENTAL CATEGORY	SHORT-TERM RESPONSE*	LONG-TERM RESPONSE*

^{*(18} independently agreed upon ratings and 2 negotiated ratings)

study. In fact, the trend of the long-term depressives seems to be at a more complex level than that of the short-term patients.

This finding may be interpreted in two ways. First, the cognitive model of depression postulates that the initial period of depression is marked by dysphoria accompanied by a weak self-schema and a relatively limited capacity to organize information from the environment (Krantz, 1985). In terms of the tentative findings of this

^{**}no significance

study, some support for this postulate is evident. The short-term depressives are, in fact, more limited than the long-term patients in terms of their predominant cognitive styles. The slight difference indicating that the long-term depressives are operating further along within the formal stages of cognitive functioning is consistent with Krantz's conjecture that in the final stage, the schema gradually increases in strength as the duration of the depression lengthens.

The second way of interpreting these findings is that the majority of the general population might be operating at the concrete and formal levels of operation and that these two samples do not vary significantly from the general population. This could be ascribed to a central tendency error if we had normative data about the distribution of predominant cognitive functioning within our society.

While the findings here are not significant, the slight difference is consistent with the body of research that suggests there is a difference in the cognitive styles of long-and short-term depressives.

Hypothesis 5: Results

H5) Short-term depressives will follow the predictions of hypothesis three more often than long-term depressives.

Using the two categories of long-term and short-term depressives, the data generated for hypothesis three were analyzed to determine if a difference existed between the

of each group. In Table 4.10, the results of this analysis are displayed. While the t-score is not significant, trend analysis indicates that more short-term depressives were able to reach the more complex levels of cognitive development and that, for long-term depressives, the amplitude was at the late concrete level of functioning.

Hypothesis 5: Findings

While the data from this analysis cannot fully support hypothesis five, it does indicate that a small, but non-significant difference in the expected direction does exist between the short-and long-term depressive's ability to respond to the SCDI. The smaller standard deviation and the greater mean indicates that more short-term depressives were able to respond at each of the eight levels, thus displaying greater cognitive flexibility.

This finding is consistent with cognitive models of depression that suggest short-term depressives demonstrate less constricted thinking patterns while long-term depressives will manifest more rigid thinking patterns. The findings of this hypothesis suggest that this pattern tends to be true for the cognitive levels stimulated by the SCDI.

Another interpretation of this data is that the lack of a significant difference indicates that the SCDI is equally effective with both short- and long-term depressed patients in eliciting verifiable cognitive-developmental responses

Table 4.10. Hypothesis Five: Holistic Treatment Phase Analysis by Diagnostic Groups

COGNITIVE-DEVELOPMENTAL CATEGORY	SHORT-TERM HIT RATE	LONG-TERM HIT RATE
EARLY SENSORI-MOTOR	10	10
LATE SENSORI-MOTOR	10	10
EARLY CONCRETE	9	7
LATE CONCRETE	8	9
EARLY FORMAL	8	9
LATE FORMAL	` 9	8
EARLY DIALECTIC	10	8
LATE DIALECTIC	10	8
MEAN	9.25	8.5
STANDARD DEVIATION	.83	1.0
t-score	1.666*	
*no significance		

*no significance

representing each of the eight categories. Both groups demonstrated that they were able to respond within the full cognitive range by answering stimulus questions aimed at eliciting such responses.

In light of the evidence that all short-term depressives and 80% of the long-term depressives were able to present verifiable responses at the early and late dialectic levels, it seems fair to state that the SCDI seems to facilitate depressives to reflect upon and even identify flaws in their thinking process. It is thought that pattern verbalization at these more complex levels may eventually assist patients to break the self-reinforcing cycle of depression.

Again, it must be strongly reiterated that these findings only indicate that both types of depressives are capable of responding at each of the eight levels with language that is verifiable. The findings cannot be interpreted to mean that therapeutic effects were generated by participation in the SCDI.

Discussion

This study has attempted to provide initial empirical data that support the reliability of the cognitive-developmental classifications derived from Ivey's Developmental Theory and the predictive validity of the intervention strategies designed in accordance with this model. Using Ivey's clinical model, both a standard interview and a classification system were developed and tested with inpatient depressives.

The research was divided into four main areas:

1. To assess the level of reliability.

 To establish the level of predictive validity.

The last two areas were specific to the theory's assessment with a depressed patient population:

- 3. To access the predominant cognitivedevelopmental level of short- and long-term depressives relative to their perceptions of their family.
- 4. To determine if the cognitive flexibility of short-term patients varied from that of long-term patients.

The first two areas were measured ostensibly by testing hypotheses one, two and three. The very strong inter-rater agreements and inter-rater reliability coefficients for the holistic and numerical scoring procedures utilized in hypotheses one and two demonstrate that the cognitive-developmental levels, as operationalized by Ivey, can be reliably assessed from the patient's natural language during the SCDI. These findings clearly suggest that, within the initial stages of the therapeutic relationship, the patient's problem-specific cognitive-developmental level can be identified. The evidence from these two hypotheses further indicate that the eight cognitive-developmental categories are discernible and that the vocabulary used by Ivey to describe these categories is appropriate and transferable to others in the helping profession.

The treatment implications of these findings are still quite tentative however, because this is only the initial study using Ivey's model and it did not focus on treatment effects or benefits. However, more clinical investigations can now proceed as the reliability of the model has been

validated. At this time, it is safe to extrapolate from the findings that Ivey's model can have significant benefit to the counseling community in terms of diagnosing patient's thinking, monitoring patient progress through treatment, and specifying appropriate cognitive-developmental levels or ranges at which to terminate treatment.

Hypothesis three tested the predictive validity of the SCDI. The findings of the two analyses support Ivey's contention that interviewer questions can facilitate patient statements indicative of each cognitive-developmental level. The connection between therapist question and patient response appears to be equal to a cause and effect relationship. Validation of this hypothesis presents many significant implications for the future clinical applicability of this model. These will be detailed later in the chapter.

Ivey's overall model, which is grounded in the field of dialectics, can now provide counselors with specific methods to tap each of the eight levels of developmental cognition. This skill can assist therapists in phrasing comments that will appropriately perturb the comfortable, yet limited opinions or attitudes that the patient may have concerning any topic or presenting problem so that a new synthesis can be fostered and an expanded cognitive-developmental repertoire can emerge.

Further, the success of this hypothesis opens up the opportunity for therapists to have at their disposal a

complete repertoire of strategic cognitive interventions that will assist the patient to move throughout the stages so as to develop multiple perspectives of the same problem. This ability would assist therapists in enacting the dialectical process and would also be consistent with Ver Eecke's concept of existential movement during treatment.

Confirmation of hypotheses one, two, and three can also be evaluated in terms of Hiesenberg's uncertainty principle. The first hypothesis received strong validation of the fact that patient responses to open-ended questions can be reliably classified by means of cognitive-developmental theory. The responses of patients during this assessment phase were influenced as minimally as possible by the questions of the interviewers. This indicates that the four main cognitive-developmental categories are discernible in the patient's natural language patterns and further adds to the validity of Ivey's construct.

In hypotheses two and three, the patient was strongly influenced by the interviewer's questions. The fact that a high level of consistency and predictability was recorded for patient responses further indicates the effectiveness of Ivey's model. On the one hand, the strong reliability and predictability scores indicate that different levels of patient conceptualizations can be stimulated by skillful questions. Thus patients can be moved from simplistic views of the problem to more complex perceptions. These findings should humble the therapist by realizing that the patient's

response may be more a product of the question than a true representation of the patient's thinking. Ivey warns us, "through skilled questioning, it is possible to lead children [patients] to perform beyond their usual cognitive levels...It does little good to move developmental progressions if that movement is caused by the therapist" (1986, p. 189).

With the reliability and predictive validity verified, the next two major areas of focus moved to work with depressed inpatients. Based on the work of researchers in the field of cognitive models of depression, this study expected to find differences for short- and long-term depressives in their predominant cognitive styles when focusing on their families and in their ability to move throughout the eight cognitive-developmental stages. work of Davis and Unruh (1981); Krantz (1985); Weingartner, Cohen, Murphy, Martello, and Gerdt (1981); and Young and Grabler (1985), suggests that cognitive styles for the two groups should vary. The results for hypothesis four indicate that, in terms of Ivey's cognitive-developmental stages, there is a slight, insignificant difference between the two groups. Since Ivey's work is generic in nature and not custom-tailored to the field of depression, it is understandable that the differences between the groups were not detected. What was noted was that even depressed inpatients' verbalizations could be reliably classified according to the guidelines established in Ivey's model.

The implications from the findings for this hypothesis are two-fold. First, that even with a treatment population noted for their minimal verbalizations, the inter-rater agreement and inter-rater reliability scores for Ivey's four main cognitive-developmental stages is very strong. This suggests that for many other patient groups, who should be more verbal, the diagnostic procedures of Ivey's model should certainly prove beneficial in rendering a patient's cognitive style specific to the presenting problem.

The second implication of this finding is now that the overall levels of developmental cognition can be defined for each sub-group of depressives, work at qualifying the type of cognition at each stage can proceed. In terms of Piaget's equilibration theory, are short-term depressives demonstrating more positive alpha reasoning than long-term depressives and which group, if either, can be moved to beta and/or gamma solutions?

In sum, while the differences in predominant presenting cognitive styles is not significantly different for long-and short-term depressives, it is clear that both groups can be reliably rated. This is the important first step that this research was designed to establish and is compatible with the work of Howard, Nance, and Myers (1986).

The last hypothesis sought to determine if there would be a difference between the two sub-populations in terms of the ability to move through the eight cognitive-developmental categories. Again, the lack of significant

difference should not be interpreted negatively. As stated previously, this research measured quantitative movement, not qualitative change. The results demonstrate that both groups can be effectively led to use different thinking ranges during the SCDI. Angelillo, Cimbolic, Doster and Chapman (1985), suggest that depressed individuals often use a purposefully ambiguous cognitive style. The evidence that depressed patients can move to more complex levels of thought can help guide therapeutic interventions to assist in establishing a greater clarity in the discrimination power of these patients. They urge that work be aimed at reducing conceptual ambiguity and the results of this research suggest that Ivey's model has great potential in this area.

The results of this hypothesis are also promising in light of other research in the area of efficacy of cognitive treatment models for depression. The work of Beck (1978); Blackburn, Eunson, and Bishop (1986); Gardner and Oei (1981); Gauthier, Pellerin, and Renaud (1983), all indicate that increased self-awareness through aggressive confrontation of depressed cognitive styles is critical to the treatment of depression. The evidence found in this study proves that Ivey's model can have strong influence in helping patients achieve a greater sense of self-awareness.

The co-raters' ability to differentiate late sensorimotor, late formal, and early dialectic verbalizations in 85% of the patients interviewed indicates that a patient's transition from simplistic to more complex and organized views of her/himself and her/his situation can be elicited by the SCDI. This can be seen in the sample statements below which are excerpts from the actual transcripts. For each example, the patients' movement to more complex and organized views can be identified in the transitions made between each of the above cognitive-developmental stages.

EXAMPLE I:

LATE SENSORI-MOTOR: ...the sense I make of it is that my whole world is crumbling down around me....There's nobody I can trust to be there.

LATE FORMAL: ...because I think the way I see things, is life is stable, things should remain constant and when these things change, I'm totally thrown for a loop.

EARLY DIALECTIC: ...it's clear that what I learned when I was growing up has not really prepared me for dealing with loss....This talk is making it kind of clear that no one ever told me or taught me how to deal with loss. So, at this point my reaction is to completely pull into myself and become paralyzed.

EXAMPLE II:

LATE SENSORI-MOTOR: ...It's like...unless I feel that way because of just being an overwhelming...sense of not being able to handle all these things that are going on.

LATE FORMAL: ...when I do what I should do for others, I stay in control...until I wear myself to the breaking point...but when I sit to re-evaluate...to think about me...the feelings that I have are too much to bear...it's like when I know what is expected of me I am in control, but when I think about what I need...I am out of control.

EARLY DIALECTIC: I think that being brought up in a family that had an alcoholic in it [makes me feel like I have] an overwhelming sense of responsibility for everybody else. When you're in an alcoholic atmosphere, your needs just don't count.

EXAMPLE III:

LATE SENSORI-MOTOR: ...it's my fault why I feel this way right now and I really can't make sense of why I let this happen...

LATE FORMAL: ... If I can't manage to keep things running smoothly, then I think I am weak... not strong enough for this family of adventurers.... I should be able to hold things together and if I can't, then that does say something bad about me.

EARLY DIALECTIC: ...[My mother] never let me do things on my own....She always closely watched and helped. I felt inadequate when she had to do everything over for me. And I think that helped me to feel less than perfect....and this has left me with some feelings of not being strong enough or not being competent enough.

Finally, hypothesis five is important for two more reasons. During the last stage of the treatment phase of the SCDI, patients were able to identify flaws in their thinking, were able to identify new behaviors that they would like to attempt, and were able to make a verbal commitment toward behavioral change. A review of the transcripts revealed that not one patient mentioned unrealistic change possibilities without recognizing them as such and that each patient made a verbal commitment to attempt some level of behavioral change.

Excerpts from the late dialectic stage of the interviews offer evidence of the depressives' ability to identify flaws in their current thinking patterns:

EXAMPLE I:

Well...the way I was brought up, I was taught not to express how I feel and not to try and change things. Well that's wrong. I can see that now. I should be able to say what I feel...and not only that, but it should mean something.

EXAMPLE II:

Well what's wrong with it is the fact that I have to change and put me first without feeling guilty.

EXAMPLE III:

You know, I can't live up to what I am suppose to be if I continue to believe that I am suppose to be perfect....I guess I have a right to react...a right to be overwhelmed.

EXAMPLE IV:

Well...there should be a way for families to help...to pitch in...without role reversal....I mean, my kids are all grown up now and it's time for them and me to stand on our own two feet.

Also, excerpts from the late dialectic stage of the interviews offer evidence of the patients' verbal commitments to attempt new behaviors:

EXAMPLE I:

...Tell them that I am not going to baby sit...I'm going to say no and help her put an ad in the paper....I could improve myself by learning to say no more than yes...I shouldn't give them the chance to depend on me.

EXAMPLE II:

I think I'll tell her what I think about her demands...it will be good to get if off my chest, to start saying how I feel.

EXAMPLE III:

I could stop provoking him...stop hitting him.

EXAMPLE IV:

Well, I'm meeting with [my therapist] this evening with my husband and my kids. I know that...I won't be able to say much about how scared I am in front of my kinds, so I will act strong in front of them. But I'm gonna ask [my therapist] if I could also have some time for just me and [my husband] to talk. I think I can start with him...tell him how scared I am.

Lastly, mean scores on the Beck Depression Inventory suggest that the total population sample was characterized within the moderate - severe range of depression (x = 24.70). The short- and long-term groups were both classified within this range. This statistical evidence suggests that Ivey's model can be verified with a depressed population sample. Of course, further research with depressed patients will be necessary to verify this beyond the level of suggestion.

Limitations

This study represents the first attempt to test the empirical reliability of Ivey's cognitive-developmental categories and the predictive validity of the SCDI designed in accordance with these categories. As such, there are several limitations that need to be stated. This research focused on the central explanatory construct and underlying premise upon which Developmental Therapy is based, specifically the four main stages of developmental cognition. The results of this preliminary work are circumscribed to only the content reliability and predictive validity of the concepts operationalized by Ivey. Under no circumstances are the results to be interpreted as artifacts of treatment interventions but rather indicators that the categories are stable and identifiable. The extension of this limit warns the reader not to view movement through the classifications as equivalent to cognitive change or

therapeutic breakthrough. This study was not designed to identify lasting effects or behavioral implementation of any "insight" a patient might have presented as a result of participation in the project. As Ivey (1986) admonishes us to remember, "unless changes in thinking or ideas are accompanied by action in the real world, therapy is only partially effective" (p. 150).

Another limitation of this work is that the use of structured rating procedures does not adequately represent reality. "It is possible to score many aspects of interview behavior, but due to the complexity of the interview, the punctuation offered by any linguistic or research system is inevitably incomplete" (Ivey, 1986, P. 257). An extension of this limit is that patients are much more complex than the mere classification system would lead us to believe. Because of these problems of simplifying reality, the findings of this research could be grossly distorted if the data is not viewed within the context of our inability to fully capture human cognition with labels and numerics no matter how sophisticated and analyzed.

A related limitation that could not be adequately controlled in this research is that of the role of the patient's unconscious. Specifically to what degree, if any, is the Hawthorne Effect in operation. Patients knew they were part of a special research project and they may have subconsciously responded more favorably because that is what they assumed the interviewer wanted, and they may have

wanted to please the interviewer. This limitation needs to be considered any time subjects sign release forms before the treatment is given, as was the procedure of this research.

The above limitations are all humbling to the researcher and the practitioner because the enormous influence of the unconscious and our inability to sufficiently describe reality renders much of the research and practice in counseling open to question as to what specifically caused or triggered what.

There are three other structural limitations of this study that have to be mentioned. First, the role of the unconscious on the part of the research team. The team that composed the interviewers, the raters, and the researchers were all firmly committed to the study and the theory.

Second, the subjects were not randomly chosen from a large representative pool of inpatient depressives but rather were selected for this research on the basis of admission to one inpatient program. The third limit is population size. The small N of this study, in addition to the lack of randomization prohibits these findings from being generalized to all depressed patients, yet it was sufficient to establish empirical evidence of Ivey's cognitive-developmental categories.

The preceding discussion of limitations may be long, but this research is the initial step of transforming Ivey's work from a theoretical to practical research and treatment

status and as such it is critical that the first steps be strong and that the researcher clearly indicate what the results represent.

Future Implications

This study limited itself to the initial empirical stage of documenting the reliability and predictability of Ivey's cognitive-developmental model. The positive results of this work now set the stage for a greater validation of the empirical validity and clinical utility of the model and of the instruments derived in accordance with it. The data presented in this work suggests that strong preliminary evidence exists as to the potential value of Developmental Therapy and offers an initial set of instruments for further development, use, and investigation. This model has implications for all areas of the counseling field: counselor education and training, counselor evaluation and supervision, diagnosis, treatment and evaluation of treatment, and counseling research.

Specifically, the next steps include further empirical validation of the reliability and predictive validity of these concepts with different patient populations. The second major area involves attempts to validate the treatment efficacy of this theory. It will be important to note if the cognitive-developmental categories can be used to monitor therapeutic progress, and if, in fact, movement to more sophisticated categories is equated with patient

improvement. Follow-up studies that measure lasting effects will be the further extent of the process.

Another extension of this research needs to be the design of experiments that identify the qualitative elements of a patient's response. This research identified that the cognitive classifications are verifiable and can be stimulated through appropriate questions. Further research should evaluate the quality of a patient's response within and across these classifications (Ivey & Goncalves, 1988). Ivey's use of Piaget's equilibration concept provides a theoretical foundation from which to develop instruments that can measure this aspect of a patient's response.

In terms of specific work with depressed patients, research projects that have a much greater number of subjects need to be completed to define if differences in predominant cognitive styles and cognitive flexibility do exist. Further, what therapeutic benefit does Ivey's model possess in relation to the treatment of short- and long-term depressives. There is tremendous potential to add explicit, reliable and valid methods of accessing, assessing, and attacking depressive cognitive formations inherent in this theory.

McNamara and Horan (1986), Martin (1984), and others have called for a paradigmatic shift to cognitive approaches in research and treatment. The results of this research poses Ivey's model to become very influential in the future research, treatment, and training practices of the field of

counseling psychology. As such, Developmental Therapy has direct implications for therapeutic practice that can be confirmed as theorists, clinicians, researchers, and counselor educators utilize this model and verify its clinical effectiveness and empirical veracity.

Conclusions

This chapter presents the results and discussion of this research project. The specific hypotheses have been stated and the analyses of collected data have been reviewed. The results for each hypothesis indicate whether the supposition has been confirmed or denied.

This study represents the first empirical effort to substantiate the quantifiable aspects of Ivey's Developmental Theory. Specifically, this research indicates that a patient's predominant level of developmental cognition relative to a particular topic can be reliably classified using a rating system based on the operationalization of Ivey's theory. In addition, a structured interview based on the principles inherent in this theory was capable of generating patient responses at each specific category.

In terms of the depressed population used for this study, the data indicate that the majority of patients were able to respond at all the cognitive-developmental levels defined by Ivey. Detailed analyses suggest that a significant difference does not exist between short- and

long-term depressives relative to their predominant cognitive styles about a specific topic and their flexibility to display evidence of verbalizations reflective of each cognitive-developmental stage.

The overall findings of this research indicate that

Ivey's terminology and categories are appropriate and can be

reliably predicted and verified. This preliminary work

represents a significant step in the process of moving

Ivey's model from theoretical formulation to empirical

validation and eventual practical implementation.

Verification of the reliability and predictive validity of this model presents important implications for the future of Developmental Therapy and the field of counseling psychology in general. At the theory level, Ivey's belief in the efficacy of matching therapist style with patient developmental level can now be systematically tested. Also, the response of each patient, now that classification is verified, can be analyzed as to the qualitative aspects of Piaget's equilibration theory. These two considerations would represent significant movement in the evolution of Ivey's model.

What is clear from this work is that Ivey's construct and vocabulary do represent therapist and patient cognitions relative to specific topics and are quantifiable. This indicates that the model has empirical integrity and offers tremendous potential as a meta-theory in the field of counseling psychology.

Finally, this chapter contains many points of caution in the possible interpretation of these results. It is imperative that these conditions be accounted for when extrapolating meaning from the findings of this work.

CHAPTER V

DEVELOPMENTAL THERAPY AND DEPRESSIVES DISORDERS:
MEASURING COGNITIVE LEVELS THROUGH PATIENT NATURAL LANGUAGE

Introduction

The focus of this research was to determine if shortand long-term depressed patients could be differentiated in
terms of their cognitive-developmental styles. Martin,
Martin, Meyer, & Slemon (1986) have criticized cognitive
theory for its lack of reliable means for measuring a
patient's level of cognitive functioning within the context
of the counseling session. This present work sought to
determine if short- and long-term depressed patients do have
different cognitive patterns and if a reliable and
predictable model of making cognitive-developmental
classifications within a counseling context is feasible.

Ivey (1986) has presented a new cognitive model -
Developmental Therapy -- based on a re-reading of Piaget.

Essentially, his argument is that the cognitive
developmental level of patients may be assessed in their

natural language during the first interview. He suggests

that it is then possible to match cognitive and behavioral

interventions with a patient's cognitive-developmental

level. Developmental Therapy posits that precise clinical

interventions can be systematically attuned to a patient's cognitive-developmental progressions. In line with this, a standard set of questions designed to expand patient cognitive functioning at four specific levels (sensorimotor, concrete, formal, and dialectic/systemic) has been developed (Ivey, 1986; Ivey, Rigazio-DiGilio, & Ivey, 1988).

Beck (1967), Ellis (1975), Paykel (1977), and Seligman (1975), have provided the clinical tapestry which clearly indicates the importance of cognitive processes in depression. Other researchers (Brown & Harris, 1978; Coyne, 1975; and Lewinsohn, Larson, & Franklin, 1981) contend that environmental factors take precedent and initiate the depressive process. Regardless of the lens through which depression is viewed (behavioral, interpersonal, environmental, cognitive, or biological) one of the major focal points of treatment is the importance of the cognitive interpretation or meaning given to events by the patient.

Developmental Therapy suggests that depression can be viewed as internal to the patient and evolutionary, and that it can result from environmental impact, individual cognitive perceptions, or more likely, an interaction between the two. This premise postulates that the cognitive styles of short- and long-term depressives will differ. It is similar to the epigenic hypothesis of Krantz (1985), who states that depression is a reciprocal process between environment and self-schema. In the first stage, whether due to trauma or past developmental history, the well-

organized, non-depressive schema begins to weaken. The social milieu notes inadequate interpersonal functioning and may respond so as to increase the weakening of positive schema and reinforce negative thinking, albeit unintentionally. A cycling pattern of increasing descent into ever more rigidly assimilated cognitive patterns emerges over time. The longer the depression, the more this rigidity in cognitive patterns emerges. This rigidity is often accompanied by an increased reduction in the patient's ability to respond to external stimuli. Other researchers confirm this cognitive difference between short- and long-term depressives (Davis & Unruh, 1981; Ross & Mueller, 1983; Weingartner, Cohen, Murphy, Martello, & Gerdt, 1981; and Young & Grabler, 1985).

The aim of this research was to test several key questions suggested by the developmental framework: 1) Can a depressed patient's predominant cognitive-developmental level related to a specific topic be reliably identified?

2) Do short- and long-term depressives differ as to their predominant cognitive-developmental level? 3) Can the responses of depressed patients to a series of structured questions be reliably identified? 4) If a clinician asks a specific set of questions aimed at eliciting specific types of patient cognitive-developmental verbalizations, do depressed patients respond at the predicted level? and 5) Do short-term depressives display greater cognitive flexibility than long-term depressives?.

Method

This section details the research methodology used in this study.

Subjects

The population sample consisted of twenty, consecutively admitted, consenting patients from a community hospital, between the ages of fifteen and seventy-four, with primary DSM - III(R) diagnoses of mood disorder or adjustment disorder with depressed mood. Exclusionary criteria included; mood syndromes, psychotic features, bipolar disorders, cyclothymia, mental retardation, severe psychoactive substance dependence, and evidence of a primary Axis II diagnosis or a secondary Axis II diagnosis of Schizotypal or Borderline disorders.

The sample was divided into two equal groups: Shortterm depressives and long-term depressives. Short-term
depressives were grouped using the following criteria:
diagnosis of adjustment disorder; diagnosis of mood
disorder, single episode with a duration less than six
months; or diagnosis of mood disorder recurrent, with a
current episode less than six months, a duration of previous
episode less than six months and a duration of remission
over a year. Patients with similar diagnostic features
except with duration periods longer than six months and less
than one year of remission were classified as long-term
depressives. Each group had one male and nine female

patients. The mean age for the short-term group was 35 with a standard deviation of 12.67 years. The mean age for the long-term patients was 50.2 with a standard deviation of 14.71 years. Other socio-economic factors (except for age-related characteristics such as number of years in current relationship) were similar for the two groups.

The mean scores on the Beck Depression Inventory (Beck, 1970) were 26.00 for the short-term group and 23.40 for the long-term group, a non-significant difference. Both groups were classified in the moderate - severe range of depression as defined by Beck. It appears that this inpatient population does not differ from the outpatient normative group originally used by Beck. Scores indicate that despite the length of the patient's depression, the intensity of her or his cognitions did not differ on the measure.

Procedures

The procedures used in this research are outlined below. The instruments that were used will be described along with the qualifications of the raters and the format in which the data were analyzed.

The Standard Cognitive-Developmental Interview

Each patient was randomly assigned to one of two interviewers who did not know whether the individual fit the criteria for long- or short-term depression. The interviews, approximately one hour in length, followed the

format of the Standard Cognitive-Developmental Interview -the SCDI -- (Ivey, Rigazio-DiGilio, & Ivey, 1987). Each
interview was audiotaped, transcribed and made available to
raters with identifying data disguised. All recommended
procedures for protection of subjects were employed.

The SCDI consists of two major sections: the assessment phase and the treatment phase. The assessment section involves asking one open-ended question about a specific topic. The treatment section is a series of eight sets of questions that focus patient thought to a particular aspect of the presenting problem. Both sections have performance criteria guidelines which are used to classify the patient's responses according to the specific cognitive-developmental levels.

The assessment phase of the interview is non-structured and begins with the question, "I would like you to say as much as you can about what happens for you when you focus on your family". The patient would then be encouraged to talk about her or his perceptions in an open way. The only performance criterion used would be that the patient actually speak a minimum of fifty words so that the preliminary cognitive-developmental level could be assessed. Developmental Therapy posits that it is possible to assess patient cognitive-developmental level on a specific topic given only a brief introduction to the problem by the patient in the interview. In order to test this, the transcript for each assessment phase was rated by two of

three independent raters as to which of the four cognitive-developmental levels was predominantly used by the patient (sensori-motor, concrete, formal, dialectic/systemic). The issue was to determine if each rater could reliably identify the predominant level in each assessment phase. Through this method, it was also possible to assess whether or not short-term and long-term depressives differ in their presenting cognitive-developmental level specific to the topic of their family.

The second phase of the SCDI, consists of eight segments which are oriented toward early and late sensorimotor, concrete, formal, and dialectic/systemic thinking. The purpose of the questioning sequence is to explore aspects of the patient's cognition around depression form four distinct epistemologies or ways of viewing the problem. For example, the patient is encouraged at the sensori-motor level to experience aspects of the depression at a deep affective level. At the concrete level, the patient describes specific concrete situations she or he has experienced. The formal level of questioning leads the patient to an epistemology oriented toward patterns of repeating behavior or thoughts. The dialectic/systemic questions move the patient furthest away from direct sensori-motor experience toward analysis of patterns and patterns of patterns.

The reliability and predictive validity issues rest on whether or not two independent raters can identify the eight

stages of each interview which were presented to them in random form with interviewers comments deleted. "If a clinician asks a specific set of questions aimed at eliciting specific types of patient cognitive-developmental verbalizations, do depressed patients respond at the predicted level in a way that can be reliably identified?" The raters must be able to identify the eight cognitive-developmental levels if we are to determine whether or not depressed patients can indeed talk about their problems from different epistemological frameworks.

Material to be Rated

The audiotape transcriptionist prepared the interviews for rating through: 1) deleting identifying data; 2) separating the assessment phase of each interview to determine if raters could reliably classify a patient's initial predominant cognitive-developmental level based on approximately 50 - 100 words (with both patient and minimally influencing interviewer statements such as paraphrase and open questions - "Tell me more."); and 3) deleting interviewer questions from the eight treatment segments and them randomizing these responses. The patient statements from the assessment phase were rated in three different ways: a) through classifying each patient statement; b) through a numerical rating which identified the patient's cognitive-developmental level as the level receiving the highest percentage of use; and c) through a

holistic/subjective, impressionistic rating. The eight segments from the treatment phase were rated through a holistic/subjective, impressionistic classification of each.

The Standard Cognitive-Developmental Classification System

The Standard Cognitive-Developmental Classification

System -- SCDCS --, (Ivey & Rigazio-DiGilio, 1988), which

delineates indicators for each level of developmental

cognition, was used to rate each interview. A training

manual, with instructions for rating each category, was used

for training the three raters in this study (Ivey & Rigazio
DiGilio, 1987). This manual has interview typescripts for

practice and expands on the specific criteria for

classifying different types of patient cognitive
developmental verbalizations. Raters practiced with the

system until they had obtained at least an 85% agreement

with the SCDCS criteria.

The two objectives of this study were: 1) To determine if interviewers could access patient verbalizations at specified cognitive-developmental levels, and 2) To determine if independent raters could indeed classify these cognitive-developmental levels reliably. As this was the first empirical study of the SCDI and SCDCS as a rating system, the data on reliability and predictive validity for the twenty patients are reported in the results section of this study.

Raters

One doctoral level psychologist rated all twenty interviews. His rating were compared to one of two masters level research team members, each of whom rated ten interviews. These two individuals were also the interviewers and did not rate any of the interviews that they conducted themselves.

Analysis and Presentation of Data

The data from this study include: 1) presentation of reliability data on the assessment phase of the Standard Cognitive-Developmental Interview in three different formats; 2) comparison of the initial 50 - 100 word ratings of cognitive-developmental level for both short-term and long-term patients; 3) presentation of the reliability data for the treatment phase of the SCDCS; 4) examination of whether or not use of the Standard Cognitive-Developmental Interview was able to elicit specific ways in which depressed patients discussed their problems; and 5) examination of whether or not short-term and long-term patients differ in their ability to respond to the specified level of interviewer questions.

Results

The data were analyzed in terms of two major research areas. The first concern was the reliability of the classification system derived from Ivey's work and the

second area of concern was the level of predictive validity generated by the use of the precise questions that compose the SCDI.

Reliability Information

As this is the first empirical test of a model which claims it is possible to classify patient or clinician cognitive-developmental level, reliability information is presented here in some detail for the various phases of this study.

The first issue was to detect if a predominate cognitive-development level could be reliably identified with just a few words. The first 50 - 100 words of the patient were classified in three ways. First, sentence by sentence ratings revealed an inter-rater agreement of 82% with a total inter-rater reliability correlation of .71 (See Table 4.1). The lower inter-rater reliability is perhaps explained by the fact that although all four categories were used, only one subject statement was identified at the fourth level, therefore attenuating possibilities for higher correlations. It is also hypothesized that a distortion occurs when patient statements are taken out of the context of the interview and that this would also lead to lower correlations. After these figures were computed, the raters negotiated their sentence by sentence differences and reached a consensual agreement for each difference. As a result of these negotiations, 16.5% of the patient

statements were classified as using primarily sensori-motor functioning as they discussed their problems; 57.5% as concrete operational, and 25.2% as formal operational. Only one patient received a negotiated rating depicting a dialectic/systemic cognitive-developmental level.

A second classification for the first 50 - 100 words was through a numerical rating procedure (See Table 4.2). Here a simple count was made for each patient sentence by sentence rating and the predominant use of a single cognitive level was noted. Using this method, 90% agreement was reached on the predominant cognitive level with an inter-rater reliability correlation of .90.

The third method asks each of the raters to holistically/subjectively identify the predominant cognitive level for each patient (See Table 4.3). This technique resulted in a 85% agreement and an inter-rater reliability correlation of .87. As a result of negotiation of differences in rating, 15% of the patient statements were classified as using primarily sensori-motor functioning during the initial phase of the interview; 50% as concrete operational; and 35% as formal operational.

The next reliability issue examined the eight phases of the interview. An overall 89% inter-rater agreement was achieved with a high.98 inter-rater reliability (See Table 4.4). The raters were given randomized segments of the interviews which were conducted using the SCDI and which correlated with one of the eight cognitive-developmental

levels. The larger inter-rater reliability here, of course, is partially explained by the fact that eight specific categories were used as compared to four in the ratings above. The most difficult categories were early concrete and early and late formal which still had 80 to 85% inter-rater agreement (See Table 4.6).

Thus, these data confirm the possibility of identifying the predominant cognitive-developmental level of depressed inpatients with some degree of reliability and consistency.

Predictive Validity Information

The second major research issue had to do with the degree of predictive validity that was derived from the analysis of data. The central question was to what degree did patients appropriately respond to specific questions designed to generate answers at a certain level of cognitive development. Two analyses were conducted to test this area. the first was based on non-negotiated scoring patterns, while the second used negotiated scores.

Using a hit rate method of analysis for non-negotiated scores, the results indicate that an overall hit rate of 89% was achieved for all interviews (See Table 4.7). The two beginning and two ending categories of the interview generated stronger response matches, while early concrete and early formal received the lowest hit rates of 80%. These scores suggest a high degree of predictive validity for the SCDI and the companion classification system.

However, when negotiated scores were used an overall hit rate of 99% was reached and the lowest cohorts were early concrete and late concrete with hit rates of 95% (See Table 4.8). This method of scoring, often used for research purposes indicates the very strong predictive validity qualities of the SCDI and the SCDCS.

Both analyses indicate that specific questions derived from Ivey's theory can stimulate patient responses at the appropriate level of cognitive development within the context of a counseling session. This suggests a high level of predictive validity for the treatment phase of this SCDI.

Short- and Long-term Depressive Comparisons

Comparisons of short-term and long-term depressed

patients on predominant cognitive-developmental level
initial assessment: No significant difference between longterm and short-term depressed patients was found during the

initial 50 - 100 word assessment phase of the interview

using the holistic classifications described above (See

Table 4.9). Two short-term patients presented at the

sensori-motor level, six at the concrete, and two at the

formal, while one long-term presented at the sensori-motor,

five at the concrete, and four at the formal.

<u>can depressed patients discuss their problems at the eight cognitive-developmental levels?</u>: Patients clearly were able to respond to the eight different levels. The data indicate that patients are able to respond to the

varying types of epistemological frameworks posed by the interviewers.

Do long-term and short-term patients differ in

flexibility - the ability to discuss their problems at

different cognitive-developmental levels?: An analysis of

these data suggests that there are no significant

differences between short-term and long-term depressives in

their ability to respond to the eight levels of the Standard

Cognitive-Developmental Interview (See Table 4.10).

Discussion

Data from this study suggest that given a specific cognitive questioning technique, short— and long—term depressives may not differ as much in their cognitive functioning as was previously believed. If a clinician defines a clear role and has equally clear goals for the interview, both short— or long—term depressives are able to discuss their issues from a variety of perspectives or epistemological frameworks. Results from this research indicate that given certain types of therapeutic environments, even long—term depressives can demonstrate the ability to respond at all eight cognitive—developmental levels.

It does seem possible to classify patient natural language as to cognitive-developmental level. Thus previous instruments, such as: the Automatic Thought Questionnaire (Hollon & Kendall, 1981); the Cognitive Bias Questionnaire

(Krantz & Hammen, 1979); and the Dysfunctional Attitude Scale (Weissman, 1978), which rely on indirect measures may be replaced or supplemented by examining actual patient language. It is important to state that the instruments derived from Developmental Therapy are not in opposition to these present instruments, but seem to be a synthesis of existing frames of reference and can be used in a naturalistic fashion within a counseling context.

The Developmental Therapy model, and the Standard Cognitive-Developmental Interview, along with its companion Classification System, all seem to offer some promise of future research and clinical work with depressives and perhaps other clinical populations as well. Goncalves (1988) has implemented Developmental Therapy in the treatment of agoraphobics, Ivey (1988) has demonstrated how to use this model with personality disorders, and Rigazio-DiGilio (1988) has adapted this method to a family therapy context.

Specifically, this study observed: 1) that it is possible to assess the cognitive-developmental level of a patient reliably given only 50 - 100 words at the beginning of an interview; 2) that it is possible to ask specific questions which come from eight different epistemological frameworks and that depressives are able to respond in a way that is reliably assessed, thus enabling them to view their problems from these different vantage points.

The work of Beck (1978); Blackburn, Euson, and Bishop (1986); Gardner and Oei (1981); and Gauthier, Pellerin, and Renaud (1983) clearly demonstrate that increased self-awareness through aggressive and systematic confrontation of depressed cognitive styles is critical to the treatment of depression. The evidence found in this study suggest that Developmental Therapy can help depressed patients achieve a greater sense of self-awareness. All of the subjects demonstrated the ability to progress from simplistic, unidimensional perspectives to more complex, multi-dimensional cognitive mind frames during the treatment phase of this study. This can be seen in the sample statements below which are excerpts from the actual transcripts.

EXAMPLE I:

LATE SENSORI-MOTOR: ...the sense I make of it is that my whole world is crumbling down around me....There's nobody I can trust to be there.

LATE FORMAL: ...because I think the way I see things, is life is stable, things should remain constant and when these things change, I'm totally thrown for a loop.

EARLY DIALECTIC: ...it's clear that what I learned when I was growing up has not really prepared me for dealing with loss....This talk is making it kind of clear that no one ever told me or taught me how to deal with loss. So, at this point my reaction is to completely pull into myself and become paralyzed.

EXAMPLE II:

LATE SENSORI-MOTOR: ...it's my fault why I feel this way right now and I really can't make sense of why I let this happen...

LATE FORMAL: ... If I can't manage to keep things running smoothly, then I think I am weak... not strong enough for

this family of adventurers.... I should be able to hold things together and if I can't, then that does say something bad about me.

EARLY DIALECTIC: ...[My mother] never let me do things on my own....She always closely watched and helped. I felt inadequate when she had to do everything over for me. And I think that helped me to feel less than perfect....and this has left me with some feelings of not being strong enough or not being competent enough.

Limitations

This research focused on the central explanatory construct and underlying premise upon which Developmental Therapy is based, specifically, the four main stages of developmental cognition. The results of this initial investigation are restricted to only the reliability and predictive validity of the concepts, the Standard Cognitive-Developmental Interview (SCDI), and the Classification System (SCDCS). The emphasis of research was not treatment of depression but rather are the cognitive-developmental categories stable, identifiable, and do the questions of the SCDI elicit appropriate patient response. Confirmation of these important first steps now sets the stage for clinicians to test these concepts and instruments in a variety of clinical and research domains in order to substantiate the usefulness of Developmental Therapy.

Conclusions

The verification of the reliability and predictive validity of the Developmental Therapy model presents

implementation of this theory. Furthermore, the positive results with the target population indicate that

Developmental Therapy can be implemented with depressed patients. Specifically, suggestions for future research are twofold. First, to perform a controlled study of the efficacy of treatment plans that are matched to the cognitive-developmental style of individual depressives. This study should be longitudinal so that significant changes and long-term effects can be monitored. Treatment plans would be geared at sensori-motor functioning, concrete operations, formal operations, and systemic functioning to test the full range of client flexibility and the therapeutic effects at each level.

Second, investigations of the cognitive processes that transcend each cognitive level need to be completed.

Developmental Therapy hypothesizes that depressives can be classified as either over-assimilators (people who impose their view of reality on the environment) or over-accommodators (people who allow the environment to determine their view of reality). specific classification criteria that is attuned to the patient's predominant cognitive-developmental level can now be developed based on the guidelines of the SCDCS. This research would investigate the veracity of this hypothesis and the clinical effects of treatment regimes designed for each type of depressive.

Both research projects present the possibility of defining a more comprehensive, inclusive, and specific approach to the treatment of depression and would offer generalizable findings for the treatment of this and other disorders.

APPENDICES

APPENDIX A

FOUR STAGES OF DEVELOPMENT: THE
RELATIONSHIP OF ADULT AND CHILD PATTERNS

1. Sensori-Motor

The "child" receives an immense amount of sense impressions (seeing, hearing, feeling, tasting, smelling) and must learn to coordinate or organize this experience. Adults also accommodate to the world of senses, but often approach it through fixed assimilated structures that determine the way they process and coordinate sensori-motor data. Affect may be summarized in the statement "I am my feelings" in which there is limited distinction made between what is seen, heard, and felt and emotions. Sensori-motor experience may also be manifested by the client whose life is figuratively (and sometimes literally) in pieces. A troubled client or patient may have difficulty in coordinating the "bumbling confusion" of the world. Emotionally, this individual may be close to that of infant experience.

Therapies associated with the sensori-motor period focus on body sensations (Rolfing, relaxation training, dance therapy, bioenergetics) or may use these same sensations as building blocks without conscious awareness in the theory (Gestalt, Rogerian, psychodynamic). Both adults and children may fail to recognize themselves as separate from their sensory input. This may be termed the integration of self with object.

2. Preoperational

The child has separated self from object, but often magically (egocentrically) believes that others see and construct the world as he or she does.

The adult comes to therapy with assimilated defense mechanisms, such as projection, believing that the way he or she perceives the world is universal. This also manifests itself in irrational or illogical thinking or stuck, repetitious behavior that is ineffective.

Affect begins to be separated from cognition. The child may overreact or underreact to an event. The emotion may be inappropriate to the situation. Most therapies seek to understand client preoperational thinking and move to higher, more sophisticated levels of consciousness and behavior.

3. Concrete Operations

The child first learns to name and describe the world, but full concrete operations come later as linear causality and predictability are learned. The child is able to act on (operate on) the world with predictable effect and impact. Conservation is particularly important.

Affective development begins to show personal control and reversi-

bility and a basic understanding of feelings is shown.

The adult in therapy becomes able to act on the world with some degree of prediction: "I do or think this, then this happens." The self is more clearly separated from object, and the individual is able to think about his or her actions and their impact.

Concrete operational therapies include many behavioral approaches, particularly assertiveness training and much of vocational counseling and planning.

4. Formal Operational

The adolescent may first realize the self by egocentric denial ("I am not a child") but gradually comes to a full awareness of self and is able to think about thinking and think about feelings. The adolescent can take data and integrate it into multiple perspectives—combine information from different areas.

The basis for idealistic thinking or thoughts about thinking and knowledge is established. Fully functioning adults represent this stage. However, the thoughts one has about oneself may be inaccurate or biased and in and of themselves preoperational.

Therapies associated primarily with this stage include Rogerian, existentialist, cognitive, and psychodynamic—those therapies that focus on thinking.

APPENDIX B

DEVELOPMENT LEVEL SCALE

The client response to a therapist's intervention may be rated on a five-point developmental level scale. The framework for the scale is based on: (1) Piagetian alpha, beta, and gamma solutions; (2) a descriptive list of psychodynamic defense mechanisms believed to be illustrative of each level; and (3) an emphasis on confrontation, the engagement of discrepancies.

Level 1: The Negative Alpha Solution

In this response, the client tends to be under the control of past assimilations and seems unable to take in and accommodate new data from the therapist. Or, accommodation to therapist interventions is so complete and the accommodative style is so rigid that it represents basic assimilation.

Related defense mechanisms: denial of external reality, major distortion, or frankly delusionary or incorrect perceptions or statements. The rigid accommodative style might be represented by flight of ideas or extreme superficial agreement with the therapist.

Score as level 1 if the client fails to recognize or deal with the contradiction or conflict, makes an abrupt topic shift, or exhibits clear indications of defense mechanisms of denial or distortion. Example:

Therapist: You appear to be very angry toward your spouse.

Client: I'm not sorry. I love him. (level 1)

Level 2: The More Mature Alpha Solution

This response shows up in most preoperational statements, where one finds irrational ideas or ineffective behavioral patterns. Most clients will present their problems at this level. Usually, portions of clients' statements will be in accord with reality, but they will often be blind to some of their illogical thinking.

Related defense mechanisms: immature defense mechanisms such as projection, partial repression, passive-aggressive thoughts or actions, acting out, immature fantasy, reaction formation, displacement, mild regression, simple conversion, provocative behavior.

Score as level 2 if the client deals with only a portion of the discrepancy or problem or overgeneralizes, deletes, or mildly distorts the verbalizations of the other. The thinking process will be in some way clearly preoperational in that the client cannot operate effectively on the environment or work effectively with others. Examples:

Therapist: You appear to be very angry toward your spouse.

Client 1: Yes, sometimes I find myself a little bit annoyed. (level 2)

Client 2: Sometimes I find myself daydreaming about how I'd like to yell, but I never say anything. (level 2)

Level 3: The Beta Solution

This response represents homeostasis—the client seeks to maintain the situation as it is. A beta solution represents a description of reality that often corresponds to that presented by the therapist, but nothing new is added by the client.

Related defense mechanisms: intellectualization, rationalization. identification, failure to bring actions into concert with ideas and feelings. In using these defense mechanisms, the client recognizes the contradictions

in the present synthesis but does not move on to a new position.

Score as level 3 if the individual describes a situation relatively accurately and tends to leave it there. The statement "There it is again," with the hands thrown up in mock inability to do anything, may be characteristic of a person at this level. Concrete operational, if/then descriptions may be expected. Examples:

You appear to be very angry with your spouse. Therapist:

Yes, I am very angry-very angry. (level 3) Client 1:

Uh-huh, that's right; for example, last night she wouldn't sleep Client 2: with me. It made me very angry. (level 3. Nothing new has been added except another example of the angry situation. The new situation could be said to be interchangeable with other situations, but the client does not observe the pattern of repetition.)

Level 4: The Early Gamma Solution

In this response, the client moves beyond homeostasis to the creation of something new. The client has added something new to her or his cognitive-behavioral frame of reference, something that was not there before. This transformation may represent an accommodation to the therapist's intervention.

Related defense mechanisms: altruism, humor, suppression, anticipation of the future, and sublimation. These more mature defense mechanisms, often considered healthy, help the client live with the situation more effectively. The client recognizes the contradiction and moves

toward a partial synthesis or new solution.

Score as level 4 if the client or therapist adds something new to the discussion and the client reflects this new idea in his or her verbalizations or behavior. At times, the underlying conflict will remain as an underlying contradiction. A sublimation, for example, may represent a "good" resolution, but the underlying conflict remains. Generally speaking, there will be some evidence of formal operational thinking and self thinking about self, including some awareness and acceptance of the fact that one cannot "have it all." Examples:

You appear to be very angry with your spouse. Therapist:

Yes, but that's part of life. I have to accept the fact that she won't behave as I want all the time. I've learned to involve myself in my work and as a Scoutmaster. It helps. (level 4. This response represents awareness and partial action.)

Client 2: You bet, he really ticks me off, sometimes almost constantly. I'm beginning to see a pattern in it, however. He seems to get angry when I'm working hard. He yells, then I yell, then we make up, even make love as a way of getting along. Just a game, but I'm getting tired of it. (level 4. This response shows awareness of formal operational thinking and self thinking about self or situation. No transcendent solution is apparent.)

Level 5: The Transcendent Gamma Solution

At this point there are no defense mechanisms that are immediately apparent. The client has arrived at a new synthesis, often of both thought and action. This synthesis itself will shortly break down into new contradictions, but for the moment, a transcendent or transforming solution has been achieved.

Scores of level 5 will be rare and, most likely, temporary and will only appear in a few client responses in an interview. The client has confronted contradiction in the context and seen beyond the confines of present-day reality for a short time. Examples:

Therapist: You appear to be very angry with your spouse.

Client 1: I didn't know that it showed. I guess I've been angry for a long time...whew...(Pause.) It gives me a whole new way to look at things. (level 5. A transcendent way of looking at things has been developed. Although it may be momentary, the client is able to confront internal and external contradiction. This client is rated 5 because a new awareness has been integrated. If the client had heretofore been denying anger, this would be a clear example of a newly integrated piece of knowledge. It is also apparent that this new data almost immediately returns the client to a level 2 or 3 response as the client learns about contradictions in the newly learned synthesis. The next client example is similar. New insights and new behaviors lead to new issues within the therapy dialectic.)

Client 2: Yes, and it's time I did something about it. She played the pattern several times now, and I haven't said anything. Could you help me deal with it? (level 5. Again, new information is being revealed, and the client is ready to attempt to bring thought and action together to deal with the spouse.)

APPENDIX C

DEVELOPMENTAL THERAPY: SUMMARY OF TECHNIQUES

To facilitate the transformation to the next stage of development, consider some strengths that are identified in the client. Recognition of these strengths by the therapist may assist the client in approaching the developmental tasks of the next stage. It will be difficult to make the transformation to the next stage unless the client has some awareness of personal strengths within the present stage. Furthermore, some minimal understanding or competence is needed at each level before the client can move to the next level.

1. Preparation-Identify the Problem

a. Goal: To obtain a general picture of the problem or concern and search for magical thinking, irrational thought or behavior, discrepancy between the real and ideal, or a conflict faced by client.

b. Basic Techniques: "Could you tell me what you'd like to talk about?" Listening skills to draw out facts, feelings, and possibly underlying meanings of client concerns.

Theoretical Options: Range from free association and discussing a new dream to identifying behavioral problems.

Sensori-Motor Issues

a. Goal: To ground the client in sensory reality and to note basic elements of the situation.

Basic Techniques: "What did you see?" "Hear?" "Feel?" Perhaps give some special emphasis to how the body felt. Offer solid attending skills (culturally appropriate eye contact, body language, vocal tone, and verbal following).

Theoretical Options: Relaxation training exercises, Gestalt excitation techniques, neurolinguistic programming (R), overlapping techniques of seeing, hearing, and feeling, or simply ask: "What behavior did you see? What did you hear? How did you feel?" A careful functional analysis as conducted by a skilled behavioral therapist to search out stimulus-response conditions is also representative of this sensori-motor grouping. Through functional analysis, it is possible to lead to later specific concrete operations and linear cause-and-effect explanations of the problem.

Transformational Question: "How do you organize the things you see, hear, feel?" "What sense do you make of these elements?

Preoperational Issues

Goal: To clarify the preoperational, magical, or irrational ideas or behavior. At issue is for the therapist to hear the client's frame of reference as it is brought to the interview. As such, this phase is often tied with phase 1.

b. Basic Techniques: Listening to the client's description of the

situation. Directly restating key words or constructs of the client may help access his or her unique constructions of the event. Attempt to draw out specific facts, feelings, and interpretations of the event.

c. Theoretical Options: Infinite (as always). For cognitive processing, the search for irrational ideas will be important. In behavioral therapy, the distinction between present behavior and desired behavior may represent the preoperational issue. In psychodynamic therapy, the issue may be the desire to understand as compared with present lack of understanding. Each theoretical school has its own constructions of the important irrational or preoperational dimensions that should be addressed in therapy.

d. Transformational Question: "Could you give me a specific example of your concern?" The client may already have presented an example. The goal is to move the client away from repeating the preoperational idea to a discussion of either

sensori-motor elements or concrete details.

4. Concrete Operations

a. Goal: To draw out in linear, sequential form the concrete specifics of the client's concern. We are not interested in interpretation; rather we want to know specific things that happened in the most concrete form possible. Avoid subjective and

evaluative language.

b. Basic Techniques: Questions and listening skills oriented to drawing out concrete aspects of the situation. A major emphasis on facts. "What happened specifically? What did you say? What did the other person say? What did you do? What did he or she do?" Distinguished from preoperational in that there the client's interpretation of data may be encouraged to discover irrational dimensions. Here, the emphasis is on mutually agreed on facts, with a limited emphasis on feelings.

c. Theoretical Options: Mainly behavioral. Even if working in a psychoanalytic orientation, the goal is still to obtain the concrete specifics of a trauma, a dream, or a "triggered" reaction.

d. Transformational Question: "Given these facts, what causes what?" This question may lead to a return to the preoperational, irrational level of functioning but introduces the late concrete operational issue of causation into the discussion.

5. Late Concrete Operations

a. Goal: To arrive at a mutually satisfactory system explaining a situation, usually with an "if/then" dimension. The client should be able to operate predictably in thought and action in the environment.

b. Basic Techniques: Drawing out what happens before and after the occurrence of the problem, concern, conflict, or irrational idea. "What happened just before?" "Then, what happened?" "What was the result?" This can be represented by an antecedent-behavior-consequent in terms of behavior or as the A BCs of rational-emotive therapy.

Theoretical Options: Behavioral and RET options seem to be clearest, but their systematic formulations may be used in psychodynamic therapy, family therapy, or another framework.

Transformational Question: "Is this a repeating pattern?" "Are there other situations where you act out this sequence?"

Early Formal Operational Thinking

a. Goal: To identify and think about behavior and thoughts, par-

ticularly repeating patterns of behavior.

Basic Techniques: "You seem to have a tendency to repeat that particular behavior, thought, or interpretation. How do you feel or think about this pattern?" "What does this pattern of behavior or thought mean to you?" "What function does this particular pattern serve for you?" The focus of these techniques will tend to be on the client and the client's constructions or interpretations of the situation.

Theoretical Options: Rogerian client-centered therapy with its emphasis on thinking about feelings and, to some extent, meanings is a framework often effective at this level. Frankl's logotherapy and much of humanistic psychology seem to oper-

ate at this self-analytical level.

Transformational Question: "How is this pattern related to other patterns that may be undergirding your thinking and behavior?"

Late Formal Operational Issues

Goal: To assist the client to see larger, consistently repeating patterns in his or her life. In effect, we started at the sensorimotor level with many small fragments of thought or behavior, organized them at the preoperational level into sometimes useful (but nonetheless magical) thinking, moved then to concrete descriptions of behaviors and thoughts, then to still larger patterns of thoughts and behaviors, and, at this level, to examining patterns of patterns.

Basic Techniques: "We see the pattern of behavior you had with your children and the pattern you use with your employees. How might these two patterns relate? Do these two patterns form a still larger pattern?" "What is the feeling you have connected with this (these) patterns? Free associate from

that feeling to an earlier period of life."

c. Theoretical Options: The psychodynamic therapies of Freud, Jung, and Adler are often characteristic of this level of cognition. Any therapy that deals with reframing reality, particularly from an unconscious orientation, follows this general model. Note that all these orientations still come from a "selforiented" model in that the client is constructing reality.

Transformational Question: "We've constructed a comprehensive picture that seems to repeat itself-there are positives and negatives in that pattern. How is or was that pattern developed or constructed in a family, social, or historical context?" This transformational question moves to dialectical awareness that personal constructions and meanings are cogenerated in a context of relationship.

Dialectical Thinking

Goal: To develop awareness that "reality" is constructed in a dialectical or dialogic relationship with one's family, one's history, one's gender-a host of relational issues. The distinction between knowledge (episteme) and intelligence (noesis) is not critical at this stage, but awareness that either may be a coconstructed view may be useful.

b. Basic Techniques: A major change occurs in that the client is encouraged to move beyond his or her own history and think about history is codeveloped or cogenerated with others. As such, questions that bring out awareness of the impact of one's family, ethnic background, race, gender, and so on all help the client see that his or her constructions were developed in the context of a network of relationships.

c. Theoretical Options: Family therapy, feminist therapy, and Lacanian conceptions all seem to emphasize the dialectic. However, the analysis of transference phenomena in analytic frameworks can lead to dialectic awareness, as can some orientations to object relations theory. All these systems in various ways lead the client to see him- or herself in a coconstructed, codeveloped context.

Transformational Question: "We've seen that your original problem or conflict can be viewed from many perspectives. Identify the flaws in the reasoning or logic behind each of those perspectives." At issue here is developing awareness that all perspectives in a deconstructionist framework have fatal illogical, preoperational flaws. We have traveled all this distance to find ourselves again at the beginning.

Deconstruction

Goal: To encounter Platonic noesis (intelligence) that each piece of hard-won knowledge has inherent flaws. We may find a perfect form, but it soon slips away from us. This may require a willingness to live with the unknowable and to accept the logic of our illogic.

b. Basic Techniques: "Each of our constructions, ideas, or behaviors contains internal contradictions. Let us seek out and challenge those contradictions. Confront the contradiction!" Even concepts taken for granted such as gender, race, or a specific pattern of life are all open for reinterpretation and systematic deconstruction as one examines their meaning.

c. Theoretical Options: Derrida and deconstruction theory, postfeminist and post-structural theory, some orientations to literary criticism, some modern feminist approaches. The implications of these new philosophic trends are only now beginning to be dimly sensed by the therapeutic field.

d. Transformational Question: "Is there a unity within this diversity?" This question for some deconstructs deconstructivism and leads us back to the unity of sensori-motor experience and the unity we can experience with others. It suggests that what we originally defined as a "problem" may in truth have been an opportunity.

Which is the higher consciousness?

Sensori-motor Setting and experiencing a flower
Concrete operational Putting the flower in an arrangement
Formal operational Writing a poem about the flower

Dialectical Analyzing the poem about the flower (or analyzing the analysis of the poem about the flower)

Have we arrived at the "end" only to begin again?

APPENDIX D

THE STANDARD COGNITIVE-DEVELOPMENTAL INTERVIEW

THE STANDARD COGNITIVE-DEVELOPMENTAL INTERVIEW

by Allen E. Ivey, Sandra A. Rigazio-DiGilio, and Mary Bradford Ivey
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GENERAL GUIDELINES

in order to ensure standardization, the interviewer must adhere to the format (e.g., sequence and content of questions) below.

The only techniques that can be used at the discretion of the interviewer are those from Ivey's Basic Listening Sequence (ivey, 1971; 1983). These techniques are attending, encouraging, paraphrasing, reflecting feelings, reflecting meanings, and summarizing and are meant to elicit further data and ensure ciarity.

INTRODUCTION TO PATIENT

INTERVIEW GOAL

To join the patient and ensure comfort and cooperation

INTERVIEWER TASK

To clarify parameters of interview and to begin

INTERVIEWER STATEMENTS

"This interview will take approximately 45 minutes to complete. Although I will be audiotaping, the interview will be typed out and all names deleted before anyone from the research team reviews it; Therefore confidentiality is ensured."

OPENING PRESENTATION OF FAMILY ISSUE

INTERVIEW GOAL

To obtain a broad picture of a family issue; the key facts and feelings as organized by the patient with minimal interference from interviewer. To assess the predominant cognitive-developmental level used by the patient.

INTERVIEWER TASK

To obtain 3-5 sentences, or approximately 50-100 words in response to the interviewer statement below.

To listen for patient's presentation of a family issue to use as the foundation for the next phase.

INTERVIEWER STATEMENTS

"To begin with, I would like you to respond to a statement that I hope will stimulate you in some way. I would like you to say as much as you can about what happens for you when you focus on your family."

Summarize to ensure clarity.

EARLY SENSORI-MOTOR/ELEMENTAL ISSUES KEY WORDS: SEE HEAR FEEL

INTERVIEW GOAL

To obtain an understanding of how the patient organizes her/his visual, auditory, and kinesthetic representation of a family issue, and to ensure s/he knows you understand.

INTERVIEWER TASK

After making the introductory statement below, use at least one question from each sensory category below to facilitate patient's punctuation of her/his sensory reality of the chosen issue. Accept randomness.

Do not attempt to move the patient beyond the specific elements as these elements are remembered. Focus on the patient's self-perceptual frame of reference.

Alm for here and now experiencing; not understanding or interpreting.

STAGE CRITERION

The patient should talk about the situation, self, or issue in a relatively random way which concretizes the problem. Interviewer may receive fragments and pieces of sensori-based data as s/he talks about what is seen, heard, and felt.

INTERVIEWER STATEMENTS

INTRODUCTORY STATEMENT

"You mentioned that ... (family issue). During this interview, I'm going to ask you some questions about this and I would like you to respond as best as you can. It will be important for you to try to directly respond to the questions I ask you. To begin with I would like you to find one visual image that occurs for you when you focus on ... (family issue presented).

SENSORY PUNCTUATIONS

- A. Visual Perceptions
 - 1. "What are you seeing?" (Change to do/did if too powerful).
 - Describe the scene where it happened in detail."
- B. Auditory Perceptions
 - 1. "What are (did) you hear(ing)?"
 - 2. "How are (did) people sound(ing)?"
 - 3. "Describe the sounds that happened in detail."
- C. Kinesthetic Perceptions
 - 1. "What are (did) you feel(ing) in your body at this (that) moment?"
 - 2. "How are (did) you feel(ing)?"
 - 3. "What are (did) you feel(ing) while this is (was) going on?"

Summarize key perceptions of patient's, using her/his important words and phrases.

LATE SENSORI-MOTOR/ELEMENTAL ISSUES KEY WORDS: BELIEF

INTERVIEW GOAL

To obtain an understanding of how the patient makes sense of the elemental Issues: her/his interpretation of the elemental data discussed, or the frame of reference that s/he brings to the interview.

INTERVIEWER TASK

To encourage patient to discuss her/his interpretation of the example by asking any of the interpretation questions below.

To discourage any further experiencing statements or any discussion of facts.

Do not challenge patient's interpretation.

STAGE CRITERION

Patient should provide a frame of reference or view of reality that, to her/him, makes meaning and sense out of the sensori-based data. At this stage, the interpretation may be incomplete or irrational.

INTERVIEWER STATEMENTS

Paraphrase if necessary.

Restate key words and phrases to assist patient to access her/his unique construction of the example.

INTERPRETATION QUESTIONS

- "How do you make sense of all this?"
- "What do you think about all of this?" B.
- "How do you explain all of this?" C.
- "How do you put this all together?" D.
- "What meaning does all this have for you?"
- "What one thing stands out for you from this?"

Summarize to ensure clarity.

EARLY CONCRETE OPERATIONAL/SITUATIONAL ISSUES **KEY WORD: DO**

INTERVIEW GOAL

To obtain concrete and specific facts pertaining to the patient's issue. The major emphasis is on description and facts with a limited emphasis on feelings and with no emphasis on evaluation or analysis.

INTERVIEWER TASK

After obtaining a good idea of how the patient experiences and interprets the situation, summarize and assist her/him to discuss the concrete details of the situation in linear, sequential form with major emphasis on facts. Assist by using any or all of the behavioral tracking questions listed below.

To encourage discussion of specific things that happened in as concrete a form as possible.

To discourage any further interpretation or subjective/evaluative verbalizations.

STAGE CRITERION

The patient should describe events in a linear relatively organized sequence with a few basic feelings. It may be that the patient offers a single perspective on the problem at this stage.

INTERVIEWER STATEMENTS INTRODUCTORY STATEMENT

"I think I have an idea about how you think and feel about this ... (family issue; paraphrase or summarize data from previous two segments). It would now be helpful for me to get an idea of an example where these images, thoughts, and feelings occur for you. Tell me all the facts."

BEHAVIORAL TRACKING QUESTIONS

- A. "Can you tell be specifically what happened?" (use if example already presented)
- B. "Could you give me an specific example?" (use if an example has not been presented)
 - 1. "What did you say (do) then?"
 - 2. "And then what happened?"
 - 3. "What did the other person say (do)?"

LATE CONCRETE OPERATIONAL/SITUATIONAL ISSUES KEY WORDS: IF ..., THEN

INTERVIEW GOAL

To arrive at a mutually satisfactory system explaining the situation under discussion, usually with an "if/then" dimension which may lead to issues of causation. To draw out what happens before and after the occurrence of the example/situation provided by the patient.

INTERVIEWER TASK

Search for antecedent and consequent conditions while still discouraging interpretation. The emphasis remains on description, not on evaluation or analysis. The question below are meant to assist the patient to review what happened before and after the situation.

STAGE CRITERION

The patient may be able to organize previous segments into linear "if/then" statements, may be able to control and describe action, and may be able to think in terms of antecedents and consequences. Logic and reversibility may be evident and patient may be able to think about actions and the impact of actions.

INTERVIEWER STATEMENTS

ANTECEDENT/CONSEQUENT QUESTIONS

- A. "What happened just before all this occurred?"
- B. "What happened afterwards?"
- C. "What was the result?"
- D. "So if you do ____, then what happens?"
- E "Given the facts as you describe them (paraphrase or summarize previous statements), what do you think causes/triggers what?"

EARLY FORMAL OPERATIONAL/PATTERN ISSUES KEY WORD: PATTERN

INTERVIEW GOAL

To move from description to examination and/or analysis of the facts of the situation and/or of the self. To facilitate the patient's identification of and examination of repetitive behavior. thoughts, and affect related to situations perceived to be similar to the primary example and related self.

INTERVIEWER TASK

To move patient away from sensory experiences and toward abstract thinking by asking some of the questions below until the patient demonstrates an ability to identify and think about repeating patterns of behaviors, thoughts, and affect that occur in situations similar to the primary example.

STAGE CRITERION

The patient will be able to offer an isomorphic situation(s) where the same sensori-motor elements and concrete-operational issues occur. The patient will be able to analyze both situation and self in this isomorphic example.

INTERVIEWER STATEMENTS

Paraphrase/summarize the linear, sequential format described previously using the patient's main constructs, key words, and phrases.

Move toward an examination of the situation by asking some of the questions below until the patient provides an isomorphic example.

- *Are there other situations that you find yourself in when you are with your family, where A. this same set of events and feelings occur for you?"
- "Does this kind of thing happen a lot for you in your family?" B.
- "Does this kind of thing happen a lot?" C.

Move toward an examination of self by asking some of the questions below until the patient shows an ability to interpret her/his repeating patterns of behavior thought, and affect.

- "What are you saying to yourself when that happens?" A
- "How do you think about yourself/see yourself in that family situation?" B.
- "Have you felt ... thought ... acted that way in other family situations?" C.
- "You seem to have a tendency to repeat that particular behavior/thought/interpretation. For example ... (paraphrase)."
 - "What do you think about this tendency of yours?" 1.
 - "What does this pattern of behavior/thought mean to you?" 2
 - "What function does this pattern of behavior/thought serve for you?" 3.

LATE FORMAL OPERATIONAL/PATTERN ISSUES KEY WORDS: PATTERN OF PATTERNS

INTERVIEW GOAL

To assist the patient to identify and examine larger, consistently repeating patterns in her/his life and to analyze these patterns from the vantage point of the self and the contextual fields within which the patient interacts.

INTERVIEWER TASK

To assist the patient to identify and examine similar situations and repetitive patterns of thoughts, behaviors, and actions in the self and in others from a multitude of perspectives that account for similarities and differences. This will be accomplished by asking some of the questions below until the patient demonstrates an ability to recognize similarities, differences, and complexities.

STAGE CRITERION

At this stage the patient may be able to examine patterns of patterns. Situationally, s/he will be able to compare and contrast different situations and coordinate this into a Gestalt, manifest in an ability to gain multiple-perspectives and a fundamental unity for situations. In relation to the self, the patient will be able to examine patterns in the self and be able to recognize mixed and complex feelings.

INTERVIEWER STATEMENTS

"You have just shared with me two ways where you (and others) behave/think/feel the same way ... (paraphrase or summarize). You have also shared with me what you think this all means for/about you ... (paraphrase or summarize)."

- "Do you see arryway these patterns are connected?"
- "Putting the two issues together, how would you synthesize them?" B.

We see the pattern of behavior and thought that you had/that can occur with the pattern of behavior and thought that you had/that can occur with _

- A "How do you think these patterns relate?"
- "Do these examples speak to even a larger pattern?" B.
- "What is the feeling you have connected with these examples?" C.
- D. "What do you think these examples speak to?"
- "What is similar about them?" E
- "How do you think your way of reacting in each situation is similar?"

DIALECTIC/TRANSFORMATIONAL/INTEGRATIVE ISSUES KEY WORDS: INTEGRATE PUT TOGETHER

INTERVIEW GOAL

To assist the patient in moving to an awareness that personal constructions of reality are cogenerated via a network of relationships (this section of the interview will limit itself mainly to the network of family relationships). To obtain a basic organizational summary of how the patient integrates what has been shared. To assist the patient to perceive this integration from several different perspectives.

INTERVIEWER TASK

To ask questions from the list below that assist the patient to see the impact of this network of relationships and to integrate the knowledge that has been shared throughout the first half of the interview.

STAGE CRITERION

The patient should be able to generate an integrative picture of what has been shared and view this from several perspectives, some which encompass the idea of reality as coconstructed.

INTERVIEWER STATEMENTS

Summarize information gained at the early and late formal levels, and follow with a question related to integration (A) and coconstruction (B).

INTEGRATION: A

- "Given what you have said about your family, yourself, and your situation (summarize using key words and phrases), how might you make sense of all these ideas as a whole?"
- "What meaning do you get here?" 2
- "What stands out for you from this session?" 3.
- "How would you synthesize this experience?" 4.

COCONSTRUCTION: B.

- "It seems we have been able to determine a pattern of thinking, feeling, and behaving that repeats itself for you when you are with your family. How do you think this pattern developed in your family; either in your family of origin, previous family environments, or your current living arrangement."
- "Are there other situations in your family that contribute to the way you think and 2 behave too?"
- "What other situations help to form the way you think and behave?" 3.
- "How did people learn these ways of thinking and acting in your family?" 4.
- "What rule are you operating under?" 5.
- "How do you suppose this way of thinking and acting came about for you?" 6.
- "How do you suppose this way of thinking or acting came about in your family?" 7.

DECONSTRUCTION/TRANFORMATIONAL ISSUES KEY WORDS: CHALLENGE THE INTEGRATION

INTERVIEW GOAL

To assist the patient to develop an awareness that all assumptions/rules can be challenged and found to have flaws and/or that there are a multitude of vantage points from which to perceive any assumption or rule; to challenge the patient's perceptions. To assist the patient to move toward action based on this move forward alternative perspectives.

INTERVIEWER TASK

To assist patient to view her/his integration from several vantage points and to discover/challenge its parameters/flaws by asking a few questions from the first set labeled challenging statements.

To assist patient to rethink her/his integration and to discover new/alternative perspectives by asking a few questions from the second set, labeled alternative statements.

To assist patient to move toward action based on her/his situational/self/belief system examination by asking a few questions from the third set labeled action statements.

STAGE CRITERION

Patient will be able to criticize and challenge her/his own integrated system and discover alternative perspectives. Patient will be able to move toward action based on these alternative perspectives.

INTERVIEWER STATEMENTS

Paraphrase or summarize knowledge obtained from previous segment:

A. "We've seen that your original example ... (paraphrase/summarize) is a typical pettern and that this pettern and your thoughts about it have developed for you within your family of origin/previous family/current family into rules of behaviors and thoughts."

CHALLENGING STATEMENTS

- A. "I wonder if it is possible to identify any flaws in these rules; any ways that these rules for thinking and acting are not valid or reasonable ... or ... don't you get what you need?"
- B. "Can you see any flaws in what everyone has learned?"
- C. "Can you see some flaws in your reasoning in the statements above?" If you were to criticize your integration, what might the major issue be?"

ALTERNATIVE STATEMENTS

- A. "Are there other ways to look at these rules you have learned ... or these situations?"
- B. "If you could add to or change these rules how would you do so?"
- C. "What could another point of view be on this?"
- D. "How might another family member describe your situation?"

ACTION STATEMENTS

- A. "When you are feeling that way, do you or could you do anything about it?"
- B. "Given the complexity of all these possibilities, what commitment might you follow despite all this?"
- C. "Will you do anything about it?"
- D. "What action will you take based on this new awareness?"
- E. "What one thing stands out for you and what will you do about it?"

END

"I hope this way of discussing you and your family offered some new thoughts for you. We all appreciate your willingness to participate. Now that the interview is over, do you have any questions you might want to ask me about our session?"

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THE STANDARD COGNITIVE-DEVELOPMENTAL CLASSIFICATION SYSTEM

THE STANDARD COGNITIVE-DEVELOPMENTAL CLASSIFICATION SYSTEM

by Allen E. Ivey and Sandra A. Rigazio-DiGilio [c] 1988 All Rights Reserved

GENERAL GUIDELINES

This classification system is required to rate the Standard Cognitive-Developmental Interview. Two scorers will independently classify the level of cognitive-development predominantly characterized by the patient's verbal behavior during different sections of the interview using the criteria set forth below. "Predominant" is defined as the cognitive-developmental level that stands out above all others.

The Assessment Phase

Each scorer will receive a typescript of the dialogue that occurred between the interviewer and patient during the assessment phase of the interview. The task for the rater is to determine the level of cognitive development predominantly represented in the patient's conceptualization of a family issue. Ratings will be made on a four-point classification scale which identifies the four basic dimensions of cognitive development: sensori-motor/elemental, concrete operational/situational, formal operational/pattern, and dialectic/transformational. It should be noted that, although more than one level may be used by the patient, the task of the scorer is to determine which of the four levels is predominantly used as a frame of reference during the assessment phase. Two methods of rating will be used:

- The raters will classify each patient statement 1) using the criteria defined on the following pages. Predominant cognitive-developmental level will be computed by percentages of client responses in each of the four cognitive-developmental categories (Ivey, 1983).
- The raters will complete a holistic classification 2) by adding overall subjective clinical expertise to the above data to provide a more overall impression (Carkuff, 1969).

The Treatment Phase

Each scorer will also receive eight intervention sections that occur during the treatment phase of the interview, divided to reflect the eight cognitive-developmental subdivisions defined below. The group of typescripts will be randomized and will include only the patient statements. task of the scorer is to holistically review each section and determine the cognitive-developmental sub-division predominantly reflected within the patient statements.

Ratings will be made on a eight point classification system which sub-divides each of the four basic dimensions of developmental cognition by early and late indicators: early and late sensori-motor/elemental, early and late concrete operational/situational, early and late formal operational/pattern, and early and late dialectic/transformational. Again, although more than one sub-division may be identified in each section the task of the scorer is to determine which of the eight is predominantly used by the patient within each section. Raters will use only the holistic method of classification for these eight sections.

COGNITIVE-DEVELOPMENTAL DIMENSIONS CRITERIA FOR RATING

I. SENSORI-MOTOR/ELEMENTAL DIMENSION

A. Early sensori-motor/elemental sub-division
Key words: see/hear/feel
The patient randomly focuses on fragments and pieces
of sensori-based data as s/he talks about the
visual, auditory, and/or kinesthetic elements of a
situation/issue.

Affect

- o The patient shows minimal distinction between sensory input and emotions.
- o The patient is dominated by sensory stimuli and affect

Cognition

- o The patient shows minimal ability to coordinate the elements of sensory-based data into an organized Gestalt.
- B. Late sensori-motor/elemental sub-division

 Key word: belief

 The patient provides a view of reality that makes sense of the sensori-based data reflective of the situation/issue in a somewhat incomplete or irrational manner.

Affect

- o The patient's emotions remain sensory-based and reactive.
- o The patient is unable to act on her/his emotions.

Cognition

o The patient offers interpretations that, no matter how sophisticated, are illusory and irrational, stated in a way that the patient could not take effective actions based on the beliefs.

II. CONCRETE OPERATIONAL/SITUATIONAL DIMENSION

A. Early concrete operational/elemental sub-division

Key word: do

The patient describes the situation/issue from a single self-perspective, in a linear, relatively organized sequence of concrete specifics. Her/his

explanation has a major emphasis on facts and some focus on a few basic feelings.

Affect

- o The patient describes general emotions simply, from one perspective, and with a lack of differentiation.
- o The patient expresses emotions outwardly.

Cognition

- The patient focuses predominantly on a factual description of the concrete details of a situation/issue from his own perspective.

 There is minimal emphasis on evaluation or analysis.
- B. Late concrete operational/elemental sub-division Key words: if ..., then The patient organizes the elements/facts of the situation/issue into linear "if ..., then" statements that may lead to issues of causation. S/he may be able to control and describe actions, and may be able to think in terms of antecedents and consequences. The focus is on facts and actions as opposed to feelings, analyzation, evaluation, or awareness of patterns. Logic and reversibility may be evident.

Affect

o The patient is able to control and describe broad-based, undifferentiated, outwardly focused affect.

Cognition

- o The patient demonstrates linear "if ..., then" thinking, emphasizing causality and predictability from a single perspective.
- o The patient is able to control and describe actions and the impact of actions.
- o The patient is able to apply logic and reversibility to concrete situations/issues.
- o The patient is able to separate thoughts and actions.

III. FORMAL OPERATIONAL/PATTERN DIMENSION

A. Early formal operational/pattern sub-division

Key word: pattern

The patient distances from description of sensory experience and moves toward examination and/or analyzation of the facts of a situation/issue or to examination and analyzation of the self. S/he is

able to identify repetitive behavior, thoughts, and affect related to various similar situations and issues.

Affect

o The patient demonstrates an awareness of the complexity of feelings

Cognition

- O The patient describes repeating patterns of thought, behavior, and affect in the self that occur across situations.
- o The patient engages in analysis of self and situation.
- B. Late formal operational/pattern sub-division
 Key word: patterns of patterns
 The patient is able to analyze patterns of patterns
 or multiple perspectives of behavior, thought, and
 feeling from the vantage points of the self and the
 contextual fields within which s/he interacts. The
 patient is able to see larger, consistently
 repeating patterns of behavior, thought, and feeling
 in her/his life and examine how s/he thinks and
 feels about the evolving theme/view of reality.

Affect

- o The patient demonstrates an ability to analyze her/his patterns of feelings.
- o The patient demonstrates an ability to identify others' feelings and be empathic.
- o The patient demonstrates an awareness that feelings can be validly expressed in multiple ways.

Cognition

- o The patient demonstrates an ability to examine the patterns of self and situation.
- o The patient demonstrates an ability to organize and analyze different situations/issues abstractly.
- o The patient may coordinate and discover new patterns, compare and contrast different situations, and form this into a Gestalt.

IV. DIALECTIC/TRANSFORMATIONAL DIMENSION

A. Dialectic/transformational/integrative sub-division

Key words: integrate, put together

The patient demonstrates an ability to generate an integrative picture that combines thought and action and shows an awareness that personal constructions

of reality are cogenerated via the family network.

Affect

o The patient offers a wider range of emotions and recognizes that it can change contextually.

o The patient recognizes that s/he can change/adapt to new situations.

Cognition

The patient demonstrates an ability to coordinate concepts and put together a holistic integrated picture.

The patient demonstrates an awareness that the evolving integration was coconstructed in a dialectical or dialogic relationship with family, history, culture, etc.

B. Dialectic/transformational/deconstruction subdivision

Key words: challenge the integration, action
The patient demonstrates an ability to criticize and
challenge her/his own integrated system and discover
alternative perspectives. The patient will be able
to think about moving toward action based on these
alternative perspectives.

Affect

o The patient is able to look at her/his entire realm of emotions and then still move beyond in an infinite reflection on reflections.

Cognition

o The patient intellectualizes and challenges her/his assumptions/integrations.

o The patient can identify the flaws in the reasoning/logic of her/his integration from various relational perspectives.

o The patient demonstrates an ability to think about action in relation to her/his new perspectives.

o The patient demonstrates an ability to think about action in relation to her/his new perspectives.

THE STANDARD COGNITIVE DEVELOPMENTAL RATING SHEET by Allen E. Ivey and Sandra Rigazio-DiGilio [c] 1988 All Rights Reserved

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Method	1:	 	

Total ____

method	T T :	

Treatment Phase:

Determine the predominant sub-division of cognitivedevelopment reflected in patient statements using only the second rating method:

Section A	Section E
Section B	Section F
Section C	Section G
Section D	Section H

APPENDIX F

DIAGNOSTIC CRITERIA/DSM-III-(R) FORM

DIAGNOSTIC CRITERIA/DSM -111-R

DIRECTIONS

Please fill out the following multiaxial evaluation profile and set of six (6) questions within one to three days of hospitalization for all patients diagnosed with a primary mood disorder (excluding mood syndromes; fifth digit codes of #42, bipolar disorders and cyclothymia) or primary adjustment disorder with depressed mood with mixed disturbance of emotions and conduct, or with mixed emotional features.'

PATIENT NAME	PATIENT CODE
CASE PSYCHIATRIST	DATE
MULTIAXIAL EVALUATION PROFILE	
AXIS I (Primary)	
	
AXIS II	
AXIS III	
) (Enduring) 4
	st G.A.F. in past year
	· · · · · ·
QUESTIONS	
1. Length of depressive illness:	year(s) month(s)
2. Frequency of depressive episodes:	
3. Number of depressive episodes:	
episode:year(s)	essive episode and current depressive month(s)
5. Length of current depressive epis	sode:year(s) month(s)
6. General Level of Functioning bety	ween episodes (using Axis V criteria):
	_
•	
Sandi Below, M.S.W	
Karen Pakula, M.S.W.	

- 1. Mood "episode" as opposed to mood "syndrome" criteria will be included so as to exclude the following:
 - A. Delusions or hallucinations occurring for as long as two weeks in the absence of prominent mood symptoms.
 - B. Disorders that are super-imposed on Schizophrenia, Schizophreniform Disorder, Delusional Disorder, or Psychotic Disorder NOS.
 - C. Disorders that are initiated and maintained by a specific organic factor.
- 2. Fifth digit codes of #4 will exclude disorders with psychotic features, either mood congruent or mood incongruent.
- 3. Other exclusions to the study are:
 - A. Axis I:
 - 1. Primary or secondary psychoactive substance abuse within the last six (6) months.
 - 2. Primary or secondary psychoactive substance dependence, continuous or episodic.
 - B. Axis II:
 - 1. Any patient with a primary Axis II diagnosis
 - 2. Any patient with the following secondary diagnoses:
 - a. Schizotypal Personality Disorder
 - b. Borderline Personality
 - C. Any patient with mental retardation (i.e., I.Q. less than 80)
- 4. In DSM-III-R, the specific psychosocial stressor(s) are noted and further specified as predominantly acute events (duration less than 6 months) or predominantly enduring events (duration greater than 6 months).

APPENDIX G

PATIENT IDENTIFICATION SHEET



BRISTOL HOSPITAL, INCORPORATED

BRISTOL, CONNECTICUT 06010

THOMAS D KENNEDY, III

589 - 2000 4954 0005 2 3

PATIENT IDENTIFICATION SHEET

DIRECTIONS

Please complete the following identifying data on any patient that the psychiatrist determines to meet the Diagnostic Criteria for this study. Forward the information to the primary researcher:

APPENDIX H

FAMILY INFORMATION SHEET

THOMAS D KENNEDY III

BRISTOL. CONNECTICUT 06010

FAMILY INFORMATION SHEET

CODE	NUMBER

This form will provide the research team with some information about you and your family that will help us understand the nature of families seeking treatment. The form is coded so that the information will be confidential.

Please fill the form out as completely as possible.

I. FOR EACH PERSON LIVING IN YOUR HOUSEHOLD, PLEASE LIST THE FOLLOWING INFORMATION. PLEASE PUT YOURSELF AS #1.

FIRST NAME	FAMILY ROLE	REL.	AGE	SEX	# YEARS IN SCHOOL	TYPE OF EMPLOYMENT	MED/PSY/ED/SUB YEARS/TREATMENT

Place additions on back

^{*} Does this person have any medical, psychological, educational, or substance abuse difficulties? If so, for how many years? Has the person received treatment for these difficulties?

II. FOR EACH FAMILY MEMBER NOT LIVING AT HOME, PLEASE LIST THE FOLLOWING INFORMATION:

FIRST NAME	FAMILY ROLE	REL.	AGE	SEX	# YRS IN SCHOOL	TYFE OF EMPLOYMENT	MED/PSY/ED/SUB YEARS/TREATMENT
							•

Place additions on back

III. FOR EACH DECEASED FAMILY MEMBER, PLEASE LIST THE FOLLOWING INFORMATION:

.FIRST NAME	RELATION- SHIP	REL.	AGE & YR. OF DEATH	SEX	# YRS IN SCHOOL	TYPE OF EMPLOYMENT	MED/PSY/ED/SUB * YEARS/TREATMENT
•							

Place additions on back

IV. PRESENT MARITAL STATUS OF HEADS OF HOUSEHOLD (Check all that apply)

	MALE	FEMALE
Living together as married		
First Marriage		
Remarried		
Single		
Never Married		
Divorced		
Separated		
Widowed		
Number of years in present relationship		
Number of previous marriages		

^{*} As stated on page 1

	INOOLE (all So	odices) Doking THE PAST YEAR:
	\$ 0.00 to \$ 9,999 \$ 10,000 to \$ 19,999 \$ 20,000 to \$ 29,999 \$ 30,000 to \$ 39,999 \$ 40,000 to \$ 49,999	\$ 60,000 to \$ 69,999 \$ 70,000 to \$ 79,999 \$ 80,000 to \$ 99,999
VI.		FIC ETHNIC GROUP? IF YES, WHICH ONE? PRIMARY GROUP
VII.	WHAT IS YOUR RACE?	
	WHITE AMERICAN INDIAN OR ALASKAN ORIENTAL BLACK	N NATIVE
	HISPANIC	

VIII. LIST ANY MAJOR EVENTS (and dates) THAT HAVE OCCURRED IN YOUR FAMILY (i.e., move, job change, death, illness, divorce, leaving home, bankruptcy)

EVENT	DATE

Thank you for taking the time to fill out this form. It will be of great assistance!

Sandra Rigazie-DiGilio, M.A. Psychiatric Social Worker

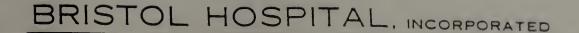
Kenneth F. Bean, M.D. Chief of Psychiatry

Patricia Whiteside, R.N./M.S.N.

Patient Care Manager

APPENDIX I

CONSENT TO PARTICIPATE FORM





BRISTOL, CONNECTICUT 06010

THOMAS D KENNEDY III

CONSENT TO PARTICIPATE

We would like to invite you to participate in a research project being conducted at the Bristol Hospital Department of Psychiatry.

The project is designed to look at how patients view their family environments and the reason they come into the hospital. It is intended to help mental health professionals provide increasingly effective treatment to patients and families when a family member is receiving hospital services.

PROCEDURE

If you choose to participate in the study, we will ask you to fill out one brief questionnaire and a family information sheet. This will take approximately 30 minutes. You will then be asked to participate in a 45 minute private interview that is designed to allow you to provide a description of some aspects of your family and the reason you came into the hospital. This interview will be audio-taped. The information from the questionnaire, the family information sheet, and the interview will not be shared with any family members; it is strictly confidential, which will allow you to respond candidly. Since the research value of the questionnaire and the interview depends on your sincere cooperation, please respond to all questions as frankly and honestly as possible.

RISKS AND BENEFITS

There are no hazards, risks, or discomforts involved in this study. We hope that you will find that participating is both interesting and beneficial. From the information that we obtain, we hope to be able to help refine the services for in-hospital patients and their families.

PRIVACY OF RECORDS

Any information that you provide to us will be used responsibly and will be protected against release to unauthorized persons. Only the primary researcher and her research team will have access to any of the material, and all material will be coded so there will be no use of names. The audio-tape will be transcribed and all names deleted so that it is also confidential.

CONCLUSION

Your decision whether or not to participate in this study will not affect your future care at Bristol Hospital or at any other service. Also, if you decide to participate, you may withdraw from the study at any time.

Your signature shows that you have read this description and agree to participate in this research project. If you have any questions, please contact Sandra A. Rigazio-DiGilio, M.A. (589-2000, Ext. 206) at the Bristol Hospital Mental Health Services.

We want to thank you for your cooperation in this project.

Sandra A. Rigazio-DiGilio, M.A. Psychiatric Social Worker

Kenneth F. Bean, M.D. Chief of Psychiatry

Patricia Whiteside EN/THEN
Patricia Whiteside, R.N./M.S.N.

Patient Care Manager

APPENDIX J

STANDARD HUMAN SUBJECTS PROCEDURES

School of Education University of Massachusetts/Amherst

Guidelines for Human Subjects Review (Doctoral Form #7A)

In accordance with University regulations, a Human Subjects Review Committee will be established in the School of Education. This Committee will conduct the review of all dissertation proposals that propose research to involve

The Committee will consist of three members, one from each Division. Primary Human Subjects review of dissertation proposals will be done at the Division level by the member from that Division. In difficult or marginal cases, the proposal will be reviewed by the whole Human Subjects Review Committee.

The Committee shall conduct reviews of all proposals in which the use of human subjects is proposed in order to determine:

a. Whether these subjects will be placed "at risk," i.e., "Exposed to the possibility of injury, including physical, psychological or social injury, as a consequence of participation as a subject in any research, development, training grant or related activity which departs from the application of those established and accepted methods necessary to meet (their) needs, or which increases the ordinary risks of daily life, including the recognized risks inherent in a chosen occupation or field of service,"

and if so

- b. That "the risks to the subject are so outweighed by the sum of the benefit to the subject and the importance of the knowledge to be gained as to warrant a decision to allow the subject to accept these risks;"
- c. That "the rights and welfare of any such subjects will be adequately protected;"
- d. That the "informed consent" of all individuals placed "at risk" shall be obtained from those individuals or their legally authorized representatives, "so situated as to be able to exercise free power of choice without undue inducement or any element of force, fraud, deceit, duress, or any other form of constraint or coercion" the informed consent to be in written form;
- e. That the information provided prospective human subjects shall include:
 - 1. "a fair explanation of the procedures to be followed, their purposes and the identification of any procedures which are experimental;"
 - "a description of any attendant discomforts and risks reasonably to be expected;"

Guidelines for Human Subjects Review, continued. . .

- 3. "a description of any benefits reasonably to be expected;"
- 4. "a disclosure of any appropriate alternative procedures that might be advantageous for the subject;"
- 5. "an offer to answer any inquiries concerning the procedures;"
- 6. "an instruction that the person is free to withdraw his/her consent and to discontinue participation in the project or activity at any time without prejudice to the subject;" and
- 7. "an explanation as to whether compensation and medical treatment is available if physical injury occurs." All research involving the use of human subjects at the University of Massachusetts/Amherst shall require a statement on the consent form that no treatment or compensation will be available to the subject if physical injury occurs in connection with the conduct of the research.

Abstract

An abstract must be submitted with the dissertation proposal if human subjects are involved. This should be a brief statement describing the use of human subjects in the research proposed. It should include the following:

- a. How will human subjects be used?
- b. How have you ensured that the rights and welfare of the human subjects will be adequately protected?
- c. How will you provide information about your research methodology to the subject involved?
- d. How will you obtain the consent of the human subjects or their legal quardians?
- e. How will you protect the privacy or confidentiality of participants?

Proposed written consent form in non-technical language. Written consent is required from each of the human subjects to be involved in any research. The consent form must include:

- a. An explanation of the research procedures to be followed and their purposes;
- b. A description of any benefits reasonably to be expected;
- c. A description of any attendant discomforts or risks reasonably to be expected:
- d. An offer to answer any questions concerning the research procedures;

Guidelines for Human Subjects Review, continued. . .

e. A statement that the subject person is free to withdraw his/her consent and to discontinue participation in the research procedures at any time, without prejudice to the subject.

PLEASE NOTE:

- a. If physical risk is involved, the consent form <u>must</u> contain the following information: "Because there is the possibility of some physical injury as described above as a result of the procedures of this experiment, the U.S. Department of Health, Education and Welfare requires that (I/we) inform you that the University of Massachusetts will not provide special, free medical treatment and/or compensation if such physical injury should occur."
- b. If minors or legally incompetent persons are to be involved as human subjects, written consent must be obtained from the parent(s) or legal guardian(s).
- c. The name and University address of the researcher must be provided to all signers of consent forms.

Oral consent may be sufficient in certain sociologically-oriented questionning. The Committee's permission for the use of oral consent is granted only when the following facts are established; a memo stating the following is needed.

- a. That the risk of physical, psychological or social injury to any subject person is minimal;
- b. That use of the procedures in (2) above for obtaining informed consent would invalidate the research objectives;
- c. That any reasonable alternative means of attaining the research objectives would be of less ultimate advantage to the subject persons.

If you have any questions concerning the review procedure, please contact the Office for Academic Affairs.

APPENDIX K

LETTER OF APPROVAL FROM BRISTOL HOSPITAL



BRISTOL HOSPITAL, INCORPORATED

BRISTOL, CONNECTICUT 06010

THOMAS D KENNEDY III

589 - 2000 *** 1000 273

February 29, 1988

Human Subjects Review Committee School of Education University of Massachusetts Amherst, MA 01003

To the Committee:

This letter is being written to verify that the Bristol Hospital, Department of Psychiatry, has reviewed the dissertation research project proposed by Ms. Sandra A. Rigazio-DiGilio, M.A., and has approved the project for implementation on the Psychiatric Inpatient Unit.

In reviewing the procedures for implementation, it has been determined that:

- 1. The information provided to prospective subjects includes a fair explanation of procedures and purposes, a clarification of non-risks and potential benefits, an offer to respond to inquiries and an instruction that the subject is free to refuse or withdraw without prejudice.
- 2. The consenting subjects will not be placed at physical, psychological, or social risk.
- 3. The rights and welfare of all consenting subjects will be adequately protected.
- 4. The informed consent of all consenting subjects will be obtained in writing.

Because the dissertation project meets the guidelines for research, as set forth by Bristol Hospital and by the University of Massachusetts, it has been approved by the undersigned.

Kenneth F. Bean, M.D.

Chief of Psychiatry

Patricia Whiteside, R.N./M.S.N

Patient Care Manager

Inpatient Psychiatric Services

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