

1989

## Measuring certain cognitive traits in depressed mothers and their children: A controlled study

James Allen Correll

*College of William & Mary - School of Education*

Follow this and additional works at: <https://scholarworks.wm.edu/etd>



Part of the [Clinical Psychology Commons](#)

---

### Recommended Citation

Correll, James Allen, "Measuring certain cognitive traits in depressed mothers and their children: A controlled study" (1989). *Dissertations, Theses, and Masters Projects*. Paper 1539618628.

<https://dx.doi.org/doi:10.25774/w4-gj36-2z36>

This Dissertation is brought to you for free and open access by the Theses, Dissertations, & Master Projects at W&M ScholarWorks. It has been accepted for inclusion in Dissertations, Theses, and Masters Projects by an authorized administrator of W&M ScholarWorks. For more information, please contact [scholarworks@wm.edu](mailto:scholarworks@wm.edu).

## INFORMATION TO USERS

The most advanced technology has been used to photograph and reproduce this manuscript from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book. These are also available as one exposure on a standard 35mm slide or as a 17" x 23" black and white photographic print for an additional charge.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

# U·M·I

University Microfilms International  
A Bell & Howell Information Company  
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA  
313/761-4700 800/521-0600



Order Number 8923053

**Measuring certain cognitive traits in depressed mothers and  
their children: A controlled study**

**Correll, James Allen, Ed.D.**

The College of William and Mary, 1989

**U·M·I**  
300 N. Zeeb Rd.  
Ann Arbor, MI 48106



MEASURING CERTAIN COGNITIVE TRAITS IN  
DEPRESSED MOTHERS AND THEIR CHILDREN:  
A CONTROLLED STUDY

---

A Dissertation  
Presented to the  
Faculty of the School of Education  
College of William and Mary

---

In Partial Fulfillment  
Of the Requirements for the Degree  
Doctor of Education

---

by  
James Allen Correll  
May, 1989

APPROVAL SHEET

We the undersigned do certify that we have read this dissertation and that in our individual opinions it is acceptable in both scope and quality as a dissertation for the degree of Doctor of Education.

Accepted May, 1989 by

*Fred L. Adair*

---

Fred L. Adair, Ph.D.

*P. Michael Politano*

---

P. Michael Politano, Ph.D.

*Roger R. Ries*

---

Roger R. Ries, Ph.D.  
Chairman, Doctoral Committee

## DEDICATION

This dissertation is dedicated to my wife, Mimi, and children, Kristen and Allison, who made many sacrifices in the years it took to complete this project. I would not have been successful in this endeavor without their patience, love, and understanding.



## ACKNOWLEDGEMENTS

The completion of this study required the assistance and cooperation of many individuals. It is with deeply felt gratitude that I acknowledge those who provided help and support.

To Dr. Roger Ries, my committee chairman, for his extraordinary patience and support throughout this research.

To Dr. Fred Adair who is a helper in the truest sense.

To Dr. P. Michael Politano for his expertise in the area of investigation and in statistical matters.

To Dr. Donna Elder who provided much support and practical advice in all phases of this research effort.

To Jim and Bill Renney, and Barbara and Allison Moore for generously providing much needed places to work on this project.

To Eldon Taylor, Director of District 19 Mental Health Services, for his active support and encouragement.

To all the therapists in District 19 Mental Health Services who helped in providing appropriate candidates for this research. Also to Ken Bussey who helped with the solicitation of volunteers.

To Sandy Ogburn who exhibited grace under pressure  
in typing the final draft.

And finally, to Dr. Kate Hudgins who joined with me  
in the defeat of fear and discouragement.

## Table of Contents

DEDICATION.....	iii
ACKNOWLEDGEMENTS.....	iv
CHAPTER	
I. Introduction.....	2
Justification for the study.....	2
Statement of the problem.....	5
Theoretical rationale.....	9
Definition of terms.....	14
General research hypotheses.....	16
Sample and data gathering procedures.....	17
Limitations of the study.....	18
II. Review of the Literature.....	20
Historical and theoretical overview.....	20
Summary of the rationale and its relationship to the problem.....	25
The role of thinking in depression.....	26
Cognitive characteristics of children with depressive symptoms.....	39
Depressed mother-child interactions.....	49
The relationship of locus of control, anxiety, and self-esteem to depression: An overview of research regarding theoretical, clinical, and measurement issues.....	57
Summary.....	68
III. Methodology.....	70
Population and selection of sample.....	70

	Data gathering methods.....	72
	Ethical safeguards and considerations.....	73
	Instruments.....	75
	Hypotheses.....	86
	Statistical analysis methods.....	87
	Summary of methodology.....	88
IV.	Results.....	89
	Hypothesis One.....	90
	Hypothesis Two.....	91
	Hypothesis Three.....	91
	Hypothesis Four.....	92
	Hypothesis Five.....	92
	Hypothesis Six.....	92
	Hypothesis Seven.....	93
	Hypothesis Eight.....	94
	Summary.....	95
V.	Summary, Conclusions, Discussions, and Recommendations.....	96
	Summary.....	96
	Statement of findings.....	98
	Conclusions.....	99
	Discussion.....	101
	Recommendations.....	107

Appendices.....	109
Appendix A. Table of Means and Standard Deviations for Case and Control Groups.....	110
Appendix B. Permission Forms .....	111
Appendix C. Request for Volunteers Memorandum.....	116
Appendix D. DSM-III-R Diagnostic Criteria for Major Depression and Dysthymia.....	117
REFERENCES.....	121
VITA.....	136
ABSTRACT.....	137

MEASURING CERTAIN COGNITIVE TRAITS IN  
DEPRESSED MOTHERS AND THEIR CHILDREN:  
A CONTROLLED STUDY

## CHAPTER I

### Introduction

#### Justification for the study

There are a number of studies which suggest that depression greatly compromises parenting ability Anthony & Ittleson, 1980; Cohler, Grunebaum, Weiss, Hartman, & Gallant, 1976; Crook, Raskin, & Eliot, 1981; Harder, Kokes, Fisher, & Strauss, 1980; Jacobson, Fasman, & DiMascio, 1975). Generally, these studies suggest that depressed parents tend to interact with their children in ways which are potentially harmful. Weissman (1979) has noted that depression makes it difficult for a mother to become meaningfully involved in her children's lives. McLean (cited in Orvaschel, 1983) found that a majority of depressed women reported being concerned about ineffective parenting. Moreover, he also noted that:

A depressed parent provides the child with an ineffective model of interpersonal coping skills so that these children learn helplessness, self-depreciation, and social withdrawal instead of effective social skills, and they are therefore more likely to develop into depression-prone adults (cited in Orvaschel, 1983, p. 176).

To what extent the presence of a depressed parent actually places a child at risk for psychological difficulties is a question which has not been sufficiently explored in research investigations. Eisenbruch (1983) has noted that there is a need to examine the social, interpersonal, and psychological aspects of the depressed woman in order to further understand the potential psychological consequences for affected children. Gittelman-Klein (1977) has observed that many of the studies which have attempted to explore the interactions between depressed women and their children are flawed by methodological shortcomings so that the results are quite varied.

This study was interested in further examining the cognitive interplay between depressed mothers and their children in the hope of further understanding this interaction and its consequences. This research effort borrowed heavily from the cognitive model of depression as articulated by Beck (1976). More specifically, an effort was made to operationalize Beck's ideas in a way so that their applicability to children could be evaluated .

This investigation took the position that the absence of discrete clinical symptoms in the offspring of depressed mothers did not necessarily mean that they were



not at risk for later difficulties. Some investigators (e.g., Robins, 1966; Tonge, 1976) found evidence that children may not manifest overt symptoms of maladjustment, and yet, may gradually begin to imitate their parent's pattern of maladjustment as they move into adolescence or young adulthood. Implicit in this was the possibility of an insidious process at work in high-risk populations of children that was not immediately discernible using conventional diagnostic and assessment methods. This idea seemed to be supported by Eisenbruch's (1983) observation that "normal children who apparently adjust to parental depression may become more damaged through internalization than other children who react more vigorously with overt symptoms" (p. 285).

The purpose of this study was to examine a population of high-risk children, defined as such on the basis of having a depressed mother, in order to further understand the extent to which a depressed mother's thinking style influences her child's attitudes and beliefs. In doing so, this study had a large investment in the idea that the children of depressed mothers may be, in some discernible way, cognitively different when contrasted with controls. The task was to show that these potential differences have clinical significance. In other words, if this study results in the

identification of certain cognitive variables which further discriminate high- and low-risk children, then useful information regarding treatment and prevention may result.

### Statement of the problem

This study examined the thinking styles of depressed mothers and their children to see if there were similarities which might have pathological implications. However, a basic problem of this study was whether the cognitive model of depression was relevant or applicable in studying children who might be at risk for depression. In other words, could depression-proneness in high-risk children be defined in a manner which was theoretically compatible with Beck's model?

It has been argued that it is feasible to work downward from adult depression, extending the models, ideas, and theories that have been useful to the study of childhood affective disorders (Cicchetti & Schneider-Rosen, 1986). Emery, Bedrosian, and Garber (1983) suggested that such an extension was clinically useful in understanding the development of depressive symptoms in children. However, it seemed apparent that the etiological aspects of the cognitive model had not really

been worked out from a developmental perspective.

Cicchetti and Schneider-Rosen (1986) commented specifically on this problem:

However, their application to children is not a straightforward matter, because of the biological and psychological differences between children and adults, and because of the orderly, systematic progression that can be observed in the development of infants and children. It is therefore necessary to take into account how the presence of this orderly development may be expected to alter, affect, or limit the extension of adult theories of depression to children. Thus, the integration of extant work on adult depression and of developmental theory provides the appropriate basis for the formulation of a developmental perspective in order to understand the symptomology, etiology, prognosis, assessment, and treatment of childhood depression (p. 72).

Campbell (1984) noted that clinical child psychology is "roughly ten years behind the adult area in the delineation of widely accepted diagnostic categories... and in the construction of models to encompass a range of potential etiological factors" (p. 324). She believed that the field had been overly dependent on methods and concepts derived from research with adults and the absence of a truly developmental focus. It was not difficult to find graphic examples of this dependency. For example, the Diagnostic and Statistical Manual of Mental Disorders (DSM-III, American Psychiatric Association, 1980) criteria for the diagnosis of major depression in children were essentially the same as those specified for adults. In another instance, Kovacs and

Beck (1977) developed the Children's Depression Inventory by modifying the adult version.

Cicchetti (1984) argued that conceptions of psychopathology had to be linked to data derived from the study of healthy children. Wenar (1982) has also suggested that researchers should adopt normal development as "the basic context for viewing and understanding psychopathological behavior" (p. 198). And yet, it has been asserted (e.g., Hodges & Siegel, 1985) that developmental aspects of childhood depression had been largely ignored in most previous research primarily by not targeting specific age ranges or using controls.

This investigation wished to acknowledge the significance of developmental factors through the use of a control group and by focusing on a relatively narrow age range (7 - 9 years). In doing so, it was hoped that significant information could be derived in terms of three basic vantage points: (1) symptomology as a function of age; (2) the effect of age-related phenomena upon the development of depressogenic cognitive symptoms; and, (3) comparisons of attitudes and beliefs of at-risk and normal children.

In essence, this study hypothesized that maternal depression represented a potential pathological influence on the developing child. To test this hypothesis, an

effort was made to discover whether there were measurable cognitive equivalents in the children of depressed mothers that corresponded to certain cognitive variables frequently mentioned in the adult literature (e.g., self-esteem, locus of control, attributions, cognitive distortion). Comparing the cognitive "styles" of at-risk children with normal controls may yield differences which have predictive significance. However, the etiological relevance of such a comparison is complex and encumbered by theoretical difficulties. Eisenbruch (1983) has addressed the specific nature of these difficulties:

Comparison of groups at high risk for pathology before the development of disturbances in the children cannot provide evidence that a given factor or characteristic of the groups contributes to the etiology of depression which may develop in children. For the data to become etiologically relevant, they must be studied as possible subjects. On the other hand, comparisons of high risk versus low risk groups are most appropriately interpreted as reflecting the characteristics, correlates, consequences, (or some combination of these), and significance of risk criteria (p. 296).

Eisenbruch's comments underscored the importance of control groups in risk research. Lefkowitz and Burton (1978) argued that information concerning the prevalence of symptoms of childhood depression needed to be acquired from normal children. In doing so, they contended that such data would enable the researcher to place any clinical investigation in proper perspective with regard to the incidence and distribution of deviant behavior in the general child population.

### Theoretical Rationale

The thesis that the special meaning of an event determines the emotional response forms the core of the cognitive model of emotions and emotional disorders as articulated by Beck (1976). In developing his theory regarding depression, he emphasized the role of cognitive factors in the emergence and maintenance of depressive symptoms. In the depressed individual, cognition is structured in negative terms, which most often represent faulty and distorted ways of viewing events (Beck, 1976).

Beck also assigned a central role to what he termed the "cognitive triad" in depression which he defined as pervasive negative attitudes that the depressed individual has toward himself, toward the outside world, and toward his future:

1. the view of self. The depressed patient's cognitive schemas that related to self-assessment consist of seeing himself as deficient, inadequate, or unworthy. He often attributes his unpleasant feelings and experiences to some kind of mental, physical, or moral defect within himself. He then considers himself worthless because of his presumed defect and "rejects" himself.

2. the view of the world. The depressed person tends to see his world as making exorbitant demands on him and as presenting obstacles that cannot be surmounted. He interprets his interactions with his environment in terms of defeat and failure, deprivation, or disparagement.

3. the view of the future. The depressed person's negative cognitive patterns that relate to the future become evident in his view that his current difficulties or suffering will continue indefinitely. Thus, he anticipates unremitting hardship, continued frustration, and never-ending deprivation. Such schemas essentially amount to a pervasive hopeless attitude (cited in Schulterbrandt and Raskin, 1977, p. 21).

A central premise of Beck's theory is that the depressed individual's negative view is usually a distortion of reality. Idiosyncratic cognitive schemas are proposed by Beck to be hypothetical structures that serve to maintain the depressogenic cognitive triad despite contradictory evidence. Schemas are viewed as stable cognitive patterns through which events are screened and interpreted. Functioning like a template, schemas actively influence the coding and evaluation of stimuli. In depression, these schemas, especially those related to self-concept and personal expectations, tend to be pervasive, rigid, and excessively negative. In another sense, these schemas can be seen as rules which greatly influence not only the person's behavior but also his expectancies, interpretations, and self-instructions. These schemas are an essential part of the dysfunctional attitudes which are activated when an individual encounters significant stress. The faulty assumptions and distorted ideas which characterize a depression-prone individual greatly influence the way in which he "organizes perceptions into cognitions, how he

sets goals, how he evaluates and modifies his behavior, and how he understands the events in his life" (Beck, Rush, Shaw, & Emery, 1979, p. 244).

Beck believes that his cognitive model of depression has application in the study of depressive symptoms in children, primarily because the cognitive conceptualization of depression can be relatively easily operationalized and lends itself to empirical verification (Kovacs & Beck, 1977). In fact, Beck has speculated that the cognitive structures associated with depression have their origins in childhood experiences. Beck (1976) believes that it is "early in the developmental period" when some individuals begin to develop the sort of cognitive distortions which may pre-dispose these individuals to depression. He postulates that it is early experiences which provide the basis for forming negative concepts about one's self, the future, and the external world. Beck also asserts that these faulty assumptions may be derived from the attitudes and opinions of parents, or possibly from "family rules" which the child internalized into his own cognitive framework (Beck, 1976). However, Beck's hypotheses and assertions regarding the etiological-developmental aspects of his theory have not been worked out in detail and have not been exposed to



empirical verification. In fact, critics of the cognitive model of depression (Izard, 1972) have pointed out that the actual etiology of persistently negative views of the self, the world, and the future is obscure.

The etiological aspect of Beck's theory can probably best be explored by adopting a developmental perspective. In fact, Beck believes that a potentially significant feature of his theory is that it may be further conceptualized in terms of cognitive developmental theory in an effort to further illuminate the psychology of childhood depression. Beck (1967) speculated that certain unfavorable life situations such as insidious stress might sensitize an individual to become "depression-prone." For the purposes of this study, insidious stress was associated with the emotional environment experienced by a child living with a depressed parent.

This investigation got its impetus from the idea that adult depression may have its origins in childhood experiences. More specifically, this study invested in the belief that children learn or acquire beliefs and attitudes that may lead to depression-proneness. It was not difficult to see that many investigators (Crook, Raskin, & Eliot, 1981; Seligman & Peterson, 1986; Rogers

Forehand, 1983; Weintraub, Winters, & Neale, 1986) argued that children might acquire depressogenic thinking style through the process of example. In his review of studies which have examined the relationship between child-rearing practices and the onset of depression, Bemporad (1978) found evidence which seemed to support the thesis that the pre-disposition to adult depression results from the individual's early relationships and from cognitive structures that are internalized. Moreover, Bemporad (1978) also asserted that the early learning of certain beliefs appeared to affect the child's way of thinking and behaving so that he might be impervious to healthier modes of adaptation later in life. Borrowing from these speculations, this research effort operated from the premise that a child's emotional development could be further understood in terms of parent child interactions. Cicchetti and Schneider-Rosen (1984) commented on the appropriateness of this approach:

Thus, in the future we must assess the nature of the relationship between parents' and children's nonverbal emotional styles as well as their emotional language systems. Such research could shed important light on the socialization of affect. If Piaget's notion of assimilation and accommodation can be transferred to the emotional domain, then one could argue that similarly to their cognitive development, children assimilate their parents' emotional reactions to their own innate emotional reaction tendencies as well as accommodate their own innate set of emotional reactions to their parents'. In other words, children's and parents'

verbal and nonverbal emotional repertoires, including their emotional styles, should be very similar (Cicchetti & Schneider-Rosen, 1984, p. 33).

### Definition of terms

The following terms were used in the paper and were defined or operationalized in the following manner:

faulty assumptions - defined by Beck as systematic thinking errors which he placed into six general categories:

1. arbitrary inference (a response set) refers to the process of drawing a specific conclusion in the absence of evidence to support the conclusion or when the evidence is contrary to the conclusion.

2. selective abstraction (a stimulus set) consists of focusing on a detail taken out of context, ignoring other more salient features of the situation and conceptualizing the whole experience on the basis of this fragment.

3. overgeneralization (a response set) refers to the pattern of drawing a general rule or conclusion on the basis of one or more isolated incidents and applying the concepts across the board to related and unrelated situations.

4. magnification and minimization (a response set) are reflected in errors in evaluating the significance or magnitude of an event that are so gross as to constitute a distortion.

5. personalization (a response set) refers to the person's proclivity to relate external events to himself when there is no basis for making such a connection.

5. absolutistic, dichotomous thinking (a response set) is manifested in the tendency to place all experiences in one of two opposite categories; for example, flawless or defective, immaculate or

filthy, saint or sinner. In describing himself, the person selects the extreme negative categorization (Beck et al, 1979, p. 14).

high risk child - for the purposes of this study, a child living with a mother who is being treated for depression.

low-risk-child - a child living with a mother with no history of depression or other psychiatric disorder.

cognitive model of depression - a model which explains the dynamics of depression in cognitive terms. The central idea of this theory is that conscious thoughts determine the nature of the emotional response.

depressogenic thinking - constitutes a pattern of information processing which results in a distortion of reality and negative emotional responses which pre-dispose the individual to depressive symptoms as articulated by the cognitive model.

depressed - a participant in this study will be classified as depressed if she meets the DSM-III criteria for either major depression or dysthymia. A clinical diagnosis of depression will be interpreted in cognitive terms so that individuals in this category are expected to manifest the sort of thinking errors and distortions articulated by the cognitive model.

non-depressed - a participant in this study will be included in the control group if she has no history of depression or other significant psychiatric disorder.

pathological - in this study, the term is used in association with certain risk factors. In general terms, maternal depression is a potentially pathological (i.e., psychologically harmful) influence on children; or, it could be hypothesized that the presence of cognitive distortions in high-risk children might have pathological implications, if conceptualized in terms of the cognitive model.

cognitive style - relates to the stable cognitive patterns which Beck believes control the manner in which an individual interprets events. For the purposes of this study, cognitive style is defined in terms of the person's feelings and beliefs about himself, others, and life in general.

#### General Research Hypotheses

1. The cognitive profiles of depressed mothers will differ substantially from those of non-depressed mothers.
2. The cognitive profiles of at-risk children will differ significantly from those of normal controls.
3. The cognitive profiles of depressed mothers will tend to "match" those of their children.
4. The cognitive profiles of non-depressed mothers will tend to "match" those of their children.

### Sample and data gathering procedures

This investigation did a cross-sectional assessment of case and control samples comprised of depressed and non-depressed mothers and their respective children. The depressed mother-child grouping (26 mothers, 26 children) included mothers currently in treatment for depression who had children between the ages of seven and nine. The control group (30 in each group) was selected from a pool of volunteers solicited from a public school system. The same age range criterion were used in the selection of control children.

The classification variable for this study was maternal depression. The predictor variables were comprised of hypothesized correlates of cognitive distortion (i.e., self-esteem, anxiety, and locus of control).

The first and most important requirement of the study was to establish case and control groupings by using appropriate clinical criteria. Prospective case-mothers were double-screened using (1) a clinical diagnosis of depression; and, (2) an assessment of the severity of symptoms using an established depression inventory (a detailed discussion of admitting and excluding criteria follows in the third chapter of this

study). Mothers in the control group had to be asymptomatic (determined also by a self-report depression inventory) and could not have histories of depression or other significant psychiatric disorder.

In addition to completing a depression inventory, all mothers also completed a battery of self-report instruments designed to measure anxiety, self-esteem, and locus of control. Their children completed the child versions of these same tests in an effort to: (1) assess the "cognitive styles of the children; and, (2) document possible correlations (in terms of cognitive patterns) in the case and control mother-child dyads.

#### Limitations of the study

The following limitations existed due to the selection process of samples and methods of assessment:

1. The results of this study were derived from samples of children falling within a specific range. Further research will be needed to determine if the conclusions obtained from this study can be generalized to children older or younger than the present sample.

2. Although an effort was made to control for factors such as social class and intelligence, other factors such as sex or general school adjustment (i.e.,

grades, behavior) were not strictly controlled so that some difference regarding these variables might have existed between case and control groups.

3. The assessment of the affective status of fathers or other significant caretakers was omitted due to design constraints. Depression in these other groups is a phenomenon which also deserves additional research attention.

4. The severity and duration of depressed symptoms were not specifically acknowledged as categorical variables in the present study. Further research will need to explore these factors in terms of their impact on children.

5. In the selection of case samples, there was no acknowledgement of the possible mitigating effects of treatment on the cognitive distortion which presumably exists in the depressed mother sample.

6. Longitudinal follow-up of the at-risk and normal samples in this study could have added information which might have enhanced the initial findings.



## CHAPTER II

### Review of Literature

#### Historical and Theoretical Overview

Researchers and clinicians have spent the majority of the last four decades trying to develop a model of childhood depression that adequately explains etiological and risk factors. However, difficulties in diagnosing depression in children or in operationally defining the symptoms of depression have been cited as major obstacles to clinical investigations in the area (Schulterbrandt & Raskin, 1977).

The prevailing influence of psychodynamic theory until the late 1950's essentially obviated research involving depression in children. Pre-pubertal children, it was argued, could not experience depression because they lacked a well internalized super-ego (Finch, 1960; Rie, 1966). However, by the early 1960's it was clear that some investigators were beginning to question this assumption. For example, Toolan (1962) and Glaser (1967) contended that developmental factors altered the expression of symptoms in children so that they bore little resemblance to adult symptomology. Essentially,

this alternative position argued that depressive symptoms in children were expressed in "equivalent" or "masked" correlates of adult symptoms. For example, Murray (1970) considered sleep disturbance, social withdrawal, fears about death, school phobias, aggression, somatic symptoms, and general anxiety as means by which children could express depression.

Other researchers were not impressed with this argument for depressive equivalencies. For example, Lefkowitz and Burton (1978) argued that the diagnosis of this "presumed condition" in children was based largely on surmise, primarily because of the failure to develop reliable and valid assessment methods. To support this contention, they offered examples of how a wide range of maladaptive behaviors in children had been re-interpreted in depressive terms. They cited studies by Kovacs and Beck (1977) and Malmquist (1975) in which the "list of feelings and behaviors observed in depressed children became so broad as to necessarily include, at one time or another during development, almost all children" (p. 718). Cantwell and Carlson (1979) also found it difficult to accept the idea that overt depressive manifestations could be masked by other symptoms. They also noted that the behaviors frequently cited as masking depression actually covered "the gamut of psychopathology in childhood" (p. 525).

Another school of thought also gradually became evident during the 1970's. Advocates of this school argued that the clinical picture of depression in childhood was indeed analogous to that seen in adults, and that the incidence of these adult-like symptoms could be clinically documented. Studies by Ling, Oftedal, and Winberg (1970), Rideau (1971), and Weinberg, Rutman, and Sullivan (1973) are representative of this position. Petti (1978) and Puig-Antich, Blau, and Nola (1977) also found the analogy approach useful in diagnosing and treating depressive symptoms in pre-pubertal children. The favorable response of children diagnosed as depressed (using adult criteria) to anti-depressant medication led Puig-Antich et al (1977) and other investigators (McConville & Boag, 1976; Petti, 1978; Gualteri, 1977) to conclude that childhood and adult depressive manifestations might be the same disorder simply occurring at different points in development.

It was also interesting to note that several investigators had discovered that samples of normal children often exhibited behaviors widely thought to be indicative of depression. For example, Lapouse's study (cited in Lefkowitz & Burton, 1978) of randomly selected children ages six to twelve revealed that over 40% of the children were reported to have seven or more fears or

worries, 20% had been enuretic in the recent past, about 50% were thought to be overactive, and 10% showed loss of temper one or more times a day. Lapouse concluded:

The strikingly high prevalence of so-called symptomatic behaviors, their excessive presence in younger as contrasted to older children, and the weak association between these behaviors and adjustment give rise to the question whether behavior deviations are truly indicative of psychiatric disorder or whether they occur as transient developmental phenomena in essentially normal children. (p. 599)

The skepticism voiced by Lapouse and other investigators (Chess & Thomas, 1972; Werry & Quay, 1971; Heatherington & Martin, 1972) began to have an influence on subsequent formulations regarding childhood depression. For example, the conclusions and recommendations of a conference on childhood depression convened in 1975 by the National Institute of Mental Health strongly supported clinically oriented investigations of normal development noting that "such investigations can provide normative data against which the assumed validity of psychological symptoms and syndromes can be assessed" (Schulterbrandt & Raskin, 1977, p. 162).

More recently, some researchers (Selman, Jacquette, & Lavin, 1977; Orvaschel, 1983; Beardslee, Keller, & Klerman, 1983; Weissman, 1979; Weissman, Merikangas, Prusoff, John, & Wickamaratne, 1985) have shifted their

research away from the study of childhood depression per se; instead, their investigations have dealt more with risk and vulnerability factors that differentiate normal and abnormal affective development. For example, Rutter (1986) believed that there were at least seven main ways in which early experiences might be linked with psychiatric disorders occurring some years later:

1. They may lead to immediate disorder, with this disorder persisting into adult life for reasons that are largely independent of the initial causation or provocation.

2. They may lead to bodily changes, which in turn influence later functioning. The changes in the neuroendocrine system following acute physical stresses in infancy constitute a case in point.

3. They may lead directly to altered patterns of behavior, which although changed at the time for the event, take the form of overt disorder only some years later. The long-term social sequelae of an institutional upbringing may represent an example of this kind.

4. They may lead to changed family circumstances, which then in turn predispose to later disorder.

5. They may operate through their action in altering sensitivities to stress or in modifying styles of coping which then protect from, or predispose toward, disorder in later life only in the presence of later stress events.

6. They may alter the individual's self-concept or attitudes or cognitive set, which then in turn influence the response to later situations.

7. Finally, they may have an impact on later behavior through effects on the selection of environments or on the opening up or closing down of opportunities. (p. 6)

Summary of the rationale and its relationship  
to the problem

Beck (1967, 1976) has argued that depression is largely a cognitive phenomenon where faulty assumptions and distorted interpretations play a causal role in the emergence and maintenance of depressive symptoms. Beck has speculated that some individuals develop "depression-proneness" by virtue of unfavorable life circumstances which leave their mark on the cognitive structures of these individuals. It is also clear that Beck believes that the process may begin "early in the developmental period"; in other words, he posits that early experiences may provide the basis for forming negative concepts about the self, the future, and the external world.

This study believed that Beck's hypotheses regarding the etiology of depression-proneness could be tested by examining certain cognitive traits of depressed mothers and their children. The rationale for this approach came mainly from certain studies which had documented depressive symptoms in the offspring of depressed mothers. The essential problem of this study was to show that high-risk children manifested cognitive "markers" which might indicate a predisposition to depression in a manner consistent with Beck's model. In doing so, it was

important to emphasize that the documentation of idiosyncratic thinking patterns in these children did not connote the presence of a depressive disorder; instead, their confirmed presence might have predictive value regarding later outcomes. This approach was supported by Rutter (1986) who believed that early detrimental experiences might "alter the individual's self-concept, or attitudes, or cognitive set, which in turn influences the response to later situations" (p. 6).

The subsequent sections of this chapter will offer research regarding the efficacy of the cognitive model in understanding the development of depressogenic thinking styles in children. Research regarding the relationship between depression and cognitive style will be explored using both adult and child populations. Literature regarding depressed parent-child interactions will also be reviewed along with research relating to hypothetical constructs and measurement issues.

#### The role of thinking in depression

Cognitive theorists (Beck, 1967; Seligman, 1975; Ellis & Harper, 1961; Rehm, 1977) have consistently argued that depression-prone individuals evidence a thinking style which is characterized by distortions and

misinterpretations of the raw data of daily living so that these people often report feelings of disappointment, self-abasement, and low self-esteem. In another sense, it can be said that depression-prone persons tend to be quite hard on themselves (and others) because of their unrealistic expectancies, goals, and standards of performance.

Efforts to generate empirical support for the idea of cognitions as causal agents in depression generally fell into two basic categories. First, there appeared to be a strong interest in the construction and validation of instruments designed to assess depressogenic cognitions. Secondly, there appeared to be an active interest in testing the causal hypothesis either through treatment manipulation, or in correlative studies where depressives were compared and contrasted with controls using certain cognitive variables.

Krantz and Hammen (1979) developed and tested an instrument designed to measure depressive distortion. Noting that previous studies (Hammen & Krantz, 1976; Nelson, 1977; Ellis, 1962) had yielded evidence supporting the relationship between cognition and mood, the authors also noted that little work had been done to test the biased or unrealistic quality of depressive cognitions. With this in mind, the authors developed a



questionnaire which they administered to depressed and normal control samples. In comparing the responses, the authors found a "consistent relation between scores on an inventory of depressive symptoms and measures of cognitive bias or distortion" (p. 615). The authors felt that the results added strength to the hypothesis of a characteristic cognitive bias in depression and that "depressive bias in the absence of depression denotes a state of vulnerability to develop depression in the presence of a personality meaningful loss or failure experience" (p. 618).

Dunn (1979) noted that the language patterns of depressed individuals appeared to differ qualitatively and quantitatively from those of the non-depressed. His observation seemed similar to Beck's (1967) description of the verbal behavior of depressives which he characterized as sparse, judgmental, and punitive. In contrast, Kovacs and Beck (1978) have noted that the verbal statements of non-depressed people were more precise, self-reinforcing, and accepting. With these distinctions in mind, Dunn (1979) constructed an experiment which is designed to modify the specific maladaptive language patterns in depression-prone psychiatric outpatients. The rationale for the study was based on the premise that the psychotherapeutic

manipulation of cognitive distortions might result in a lessening of depressive symptoms. The resulting data (comparing treatment and no treatment groups) supported the efficacy of cognitive modification in the reduction of expressed and observed levels of depression, and these positive changes were still evident upon re-test six months later.

The theoretical literature (Beck, 1967; Kovacs & Beck, 1978; Seligman, 1975) has asserted that depressed individuals have recognizable maladaptive cognitive content and processes that contribute to and exacerbate depressive symptomology. An ongoing problem has involved the isolation and identification of certain cognitive traits possessed by depressives that have discriminating value. Krantz and Hammen (1979) recognized this need by developing a questionnaire designed to identify the characteristic cognitive bias thought to be present in depressed populations. Other researchers have taken existing depression and cognitive assessment instruments and used them in studies in order to establish a causal link between depression and cognitive style. For example, Norman, Miller, and Klee (1983) designed a study in which they measured certain cognitive traits of depressed and non-depressed psychiatric inpatients. They administered the Cognitive Bias Questionnaire (Krantz &

Hammen, 1979), the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), the Present State Examination (Wing, Birley, Cooper, Graham, & Isaacs, 1967) to both experimental and control groups. They found that depressed subjects were more likely to manifest depressed-distorted responses than non-depressed subjects. Also, a significant correlation was noted in terms of depressed-distorted scores amongst the different self-report measures utilized.

Lewinsohn, Larson, and Munoz (1982) reported similar findings in their study which examined the efficacy of certain measures in identifying the kinds of cognitions hypothesized to be important for the occurrence of depression. The authors constructed three instruments which were theoretically derived from the positions (regarding the role of cognitions) espoused by Beck (1967), Ellis and Harper (1961), and Rehm (1977). The Subjective Probability Questionnaire was designed to operationalize Beck's cognitive triad, defined as a pervasive negative attitude toward the self, the world, and the future. The Cognitive Events Schedule was constructed to probe the thought content of subjects regarding negative and positive expectancies. The Personal Beliefs Inventory consisted of 30 statements selected from the writing of Albert Ellis and others in

the rational-emotive tradition. After administering these instruments to depressed and non-depressed subjects, an analysis of the data yielded significant correlations in the scores of depressives on the three instruments. The magnitude of the correlations suggested that depressed individuals who endorsed irrational thinking were also likely to have more negative thoughts and fewer positive expectancies. These findings corroborated the results reported by Lobitz and Post (cited in Lewinsohn, 1982) who also found positive correlations among three conceptually different cognitions (i.e., self-expectations, self-evaluation, and self-reward).

There are two classes of cognitions that are relevant to depression. First, there are the automatic thoughts (Beck, 1976; Beck, Rush, Shaw, & Emery, 1979) which can be defined as relatively spontaneous ideas which tend to maintain dysphoric mood and depressive symptomology. Secondly, there are schemas which are defined as "stable cognitive patterns which serve as a basis for molding data into thoughts" (Beck et al, 1979). Dobson and Shaw (1986) believed that schema-based cognitions were more central to the etiology of depression. To strengthen their argument, they cited other cognitive theorists (e.g., Arnkoff, 1980; Guidano &

Liotti, 1983) who also supported the idea that there are stable patterns of self-referent thinking that predispose depressive responses when the individual experiences salient stressors. Dobson and Shaw also noted that these thinking patterns had been defined in a variety of ways:

These stable cognitive patterns have been referred to as schemas, assumptions, deep structures, and beliefs. Other types of automatic thinking seen in depression, according to this model, result from some dynamic interplay between cognitive structures and life events (Guidano & Liotti, 1983). Although the automatic thinking may be relatively time-limited and vary as a function of the severity of depression, stable patterns of thinking should be relatively consistent within the depressive episode (p. 14).

With these considerations in mind, Dobson and Shaw (1986) utilized a number of cognitive assessment instruments to determine which cognitive aspects exist and are stable in clinical depression. In the first part of the study a battery of cognitive assessment measures (e.g., Automatic Thoughts Questionnaire, Cognitive Response Test, and Interpretation Inventory) were contrasted using three groups (major depression patients, non-depressed psychiatric, and non-psychiatric hospital patients). The second part of the study focused only on the depressed population in order to examine the stability of cognitive patterns in that group. The results of the study led the authors to conclude that the cognitive assessment measures used were "specific to major depression and that

they possessed strong internal reliabilities while also correlating well with both themselves and measures of severity of depression" (p. 25). The second main finding of the study was that certain aspects of thought related to depression remained stable even though the severity of symptoms changed. The authors felt that these results strengthened the argument for the existence of a stable pattern of situationally connected interpretations and ratings in depression.

If cognitions have a casual role in depression, then it could be argued that modification of cognitive patterns might result in measureable changes in severity of symptoms. Teasdale and Fennell (1982) conducted a study of moderately to severely depressed patients in which they compared the effects of exploring versus modifying depressive thought content. Specifically, the authors exposed the same clients to both experimental conditions (thought exploration and thought change). Using a battery of self-report instruments (devised by the authors), they reported that in each case, the thought change condition produced more change in belief than did the thought exploration condition. These findings are similar to Dunn's (1979) where he manipulated language patterns in depression-prone subjects and reported a lessening of depressive symptoms.

Beck (1967) has also asserted that cognitive distortions which lead to negative self-evaluation and excessive self-criticism frequently occur in areas that are important to the individual (e.g., work, family, or social situations). To further test this idea, Kanfer and Zeiss (1983) constructed a study whose purpose was to examine the pattern of relationships among standards and self-efficacy expectations for depressed and non-depressed subjects. The authors' use of Bandura's (1977) self-efficacy construct was justified by their belief that "self-efficacy judgments are powerfully influenced by information derived from mastery experiences as judged in terms of standards for competence" (p. 320). The findings of their study revealed that depressed subjects tended to judge themselves as less self-efficacious in the area of interpersonal functioning when compared with non-depressed controls. The authors felt that this finding was consistent with research by Lewisohn et al (1982) which also found that depressed individuals perceived themselves as less competent socially.

Despite the volume and variety of studies which tend to support the idea of cognitive distortion as a salient feature in depression, other researchers and theorists have argued that the empirical validation of the

distortion concept is problematic. Williams (1984) has noted the ongoing debate between those who argue that cognitive events precede and cause emotional disturbance, and those who saw cognitive distortion as a product or correlate of emotional disorders like depression. A review of the literature revealed a number of theoretical and empirical challenges to the argument that persistent patterns of negative thinking occur prior to and then render a person vulnerable to depressive breakdown in the face of stress.

Coyne (1982) criticized the concept of cognitions as causal entities on theoretical grounds:

There is seldom any discussion of the assumptions explicit in the manner in which the concept of cognition is invoked in theory, research, and practice. Yet how we formulate the notion of cognition dictates what we admit as data and as acceptable data collection procedures, the types of theoretical puzzles and experimental problems we pursue, and the therapeutic interventions we develop. It also determines the particular situations in which we tend to suspend critical judgment--i.e., to fall into tautological reasoning and to accept weak methodologies as if they were stronger in their implications (p. 3).

Coyne believed that the conceptions of cognitions as causal agents had led theorists and researchers to pursue what he termed "pseudoissues" regarding the causal priority of cognition so that they made stronger inferences from correlational studies than were justified. Hammen and Krantz (1985) suggested that some



of the methodological and conceptual difficulty inherent in the cognitive model of depression came from a lack of definitional specificity. They noted that cognition was a term which was typically used to describe both the processes involving thinking and perceiving, and also the content or product of such a process. Consequently, they noted that "process versus content distinction has not been clearly drawn in most depression research, often with the result that demonstrated differences between the content of cognitions given by depressed and non-depressed persons has been taken as evidence of differences in the process of their thinking" (Hammen & Krantz, 1985, p. 431).

Empirical studies have also yielded evidence which did not support the cognitive model of depression. For example, Lewinsohn, Steinmetz, Larson, and Franklin (1981) conducted a large scale prospective study in which they gave nearly a thousand individuals various cognitive measures (i.e., locus of control measure, a measure of expectancies for negative and positive outcomes, an Irrational Beliefs Questionnaire, and a measure of self-esteem) one year apart. Having identified 85 subjects who had become depressed in the subsequent interval, the investigators then checked back to see if (1) the pre-test protocols of these affected individuals

were "cognitively" different from the normal sample, and (2) if there was a discernable relationship between current depression and cognitive style. The results clearly showed that currently depressed subjects differed on virtually all measures. On the other hand, the "to-be-depressed" group did not differ from controls on any measure when pre-test protocols were compared. This led the authors to conclude that there appeared to be little relationship between antecedent cognitions and future depression.

In a similar vein, Wilkinson and Blackburn (1981) studied recovered depressives using the rationale that "patients who have recovered from a depressive illness can be defined as depression-prone...and should still exhibit the typical thinking which made them vulnerable to depression" (cited in Williams, 1984, p. 185). This is in keeping with Beck's idea that depressogenic assumptions "form a personal matrix of meaning and value, the backdrop against which everyday events acquire relevance, importance, and significance" (Beck, 1979, p. 244), and that an individual remains vulnerable to future depressions unless these faulty assumptions are identified and changed. The results of the study, which compared the cognitive styles of recovered and currently depressed subjects, indicated that currently depressed

subjects evidenced much more distortion than did recovered depressives; in fact, the cognitive profiles of recovered subjects closely resembled those of normal controls. The authors concluded that "cognitive distortion would appear to be specific to the illness phase of depression and not to depression-prone individuals...a state not a trait" (Wilkinson & Blackburn, 1981, cited in Williams, 1984, p. 186).

The cited studies seemed to support Coyne's (1982) assertion that cognitive researchers had generated a causal relationship between cognitions and depressive behavior which he termed "mechanistic" and "linear"; consequently, the focus had been disproportionately directed toward the measurement of effects:

Writers...are frequently interested in making a general statement that cognitive features of complex psychological phenomena are the causes of concurrently observed emotional, motivational, and behavioral features of the same phenomena...The typical experimental observation of depressed persons does not allow an unraveling of the causal sequences in the development of the disorder, only an assessment of the correlates of some measures of depression (p. 7).

It appears that the cognitive distortion construct is complex and theoretically difficult. Objections and criticisms result mainly from concerns regarding conceptual and methodological issues. Hammen and Krantz (1985) have noted that assessment difficulties are also a problem primarily because of validity issues regarding

self-report instruments which are used almost exclusively to measure depressive cognitions. A review of the critical research also reveals a strong challenge to the presumption that dysfunctional cognitions are linked to depression in a simple linear model of causality.

Cognitive characteristics of children with  
depressive symptoms

It has been previously noted that findings from the adult literature on depression have guided much of the research in the area of childhood depression. In adopting this approach, a number of variables thought to be related to depression in adults have been tested for their relevance to depressive behaviors in children. One of the areas in which parallels between adults and children has been investigated is the relationship between depressive symptoms and several cognitive variables including general intellectual functioning, problem-solving skills, attributional style, self-esteem, locus of control, and anxiety.

Brumback, Jackoway, and Weinberg (1980), using a sample of children ages five to twelve, were not able to document significant differences on depressed and non-depressed children's performances on standardized

tests of intelligence and achievement. On the other hand, Lefkowitz and Tesiny (1980) and Tesiny, Lefkowitz and Gordon, (1980) reported a negative relationship between self-rated depression and both intellectual functioning and academic achievement in a large sample of elementary children (cited in Hodges & Siegel, 1985).

A number of researchers have noted the theoretical and empirical problems associated with applying the cognitive distortion construct to children. Kaslow, Rehm, and Siegel (1984) have pointed out that little has been done to explore the cognitive aspects of childhood depression so that there is only limited evidence which supports the idea of thinking errors in children with depressive symptoms. Kendall (1981) believes that depressed children evidence cognitive deficits, not thinking errors per se. On the other hand, Emery, Bedrosian, and Garber (1983) argued, using cognitive developmental constructs, that children did have the capacity to distort and misinterpret information not unlike their adult counterparts:

According to cognitive developmentalists such as Piaget (1970) and Flavell (1977), pre-pubertal children between the ages of seven and twelve are in the midst of the concrete-operational period. This stage is characterized by inferences, decentering, and reversibility. The child is closely tied to the concrete reality of the here and now; however, the child is capable of making inferences about reality that go beyond mere appearances... In addition, children develop perspective taking ability during

middle childhood; this allows them to infer motives and attribute beliefs to others, even if they are not always accurate...Thus, children in the concrete-operational stage of development can make inferences from concrete reality. They have the cognitive capacity to experience such symptoms of depression as guilt, low self-esteem, misattributions of blame, and feelings of rejection (p. 488).

Other theorists and researchers differed from Emery et al (1983) in the manner in which they approached the age developmental problem when considering depressive symptoms in children. For example, the results of a study by McConville, Boag, and Purohit (1973) suggested developmental trends in the display of depressive behaviors. Children six to eight years old tended to express sadness and helplessness; negative self-esteem was generally expressed by children older than nine years; moreover, guilty and self-harmful thoughts were only evident in the oldest children (over eleven years). In a similar vein, Hodges and Siegel (1985) suggested that the nature of depressive symptoms in children might vary with the child's developmental level of cognitive ability (e.g., Piagetian stages) rather than merely being a function of chronological age only.

Empirical studies have offered evidence which supports the validity of the distortion construct in describing depressive phenomena in children. Leon, Kendall, and Garber (1980), using a large sample of

children in grades 3-6, designed a study whose purpose was to evaluate similarities between depressive symptoms in children and adults. The cognitive component of depression was evaluated by examining the children's attributions and expectations about intellectual as well as interpersonal events. Using data derived from parent, teacher, and child self-report instruments, the authors looked for discriminating differences in the protocols of depressed and non-depressed child samples. The findings indicated several similarities between adult symptoms and those observed in the sample of children. For example, there was a tendency for the depressed children to make internal attributions for negative events and external attributions for positive events. Moreover, a moderate degree of correlation was found between self-reported symptoms and behaviors noted by parents and teachers.

Kaslow, Rehm, and Siegel (1984) examined depression and its social-cognitive and cognitive "correlates" in a sample of elementary children (grades 1, 4, and 8). Constructing hypotheses derived from adult depression models, the authors predicted that depressed children (when contrasted with a control sample) should (1) attend selectively to negative events, (2) set more stringent criteria for their own performance, (3) evaluate their performance more negatively, (4) exhibit

a more depressive attributional style, and (5) punish themselves more and reward themselves less. The results of the study led the authors to conclude that "the social-cognitive models of depression developed with adults seem to be heuristically useful frameworks for understanding the social-cognitive correlates of depression in children" (p. 617). The resulting data from a battery of self-report instruments (i.e., Coopersmith Self-Esteem Inventory, KASTAN Children's Attributional Style Questionnaire, and Social-Cognitive Inventory) revealed that children with more prominent depressive symptoms were found to (1) have lower self-esteem, (2) make more depressive attributions, and, (3) exhibit self-control deficits in terms of expectations, criteria for failure, and self-evaluations. Also, noting the apparent lack of developmental variation in the findings, the authors surmised that "by first grade, most, if not all, children possess the basic cognitive processes commonly associated with, and necessary to depression...thus, age differences in depression might be expected to show up in more subtle ways than in global scores" (p. 618).

Some researchers have focused specifically on self-esteem as a means of measuring the cognitive dimension of depression in children. For example,



Fielstein, Klein, Fischer, Hanan, Koburger, Schneider, and Leitenberg (1985) screened nearly 600 elementary children and extracted a high and low self-esteem group. The data derived from a number of self-report questionnaires (i.e., Piers-harris Self-Concept Scale; Attribution Questionnaire) revealed that high self-esteem children were more likely to attribute their success to "ability" and their failure to either lack of effort or "bad luck." Low self-esteem children tended to attribute their success to "good luck" and their failure to "lack of ability." Additionally, these attributional tendencies were most apparent in the social domain.

In a study which has important conceptual similarities to Fielstein et al (1985), Mullins, Siegel, and Hodges (1984) examined the relationship of various cognitive and life event variables to depressive symptoms in children--namely, locus of control, interpersonal and impersonal problem solving ability, and objective and subjective life stress. Noting that locus of control "had been consistently found to have a strong relationship to depression in children" (p. 306), the authors administered a battery of measures (i.e., Childrens Depression Inventory; Nowicki-Strickland Locus of Control Scale; Emotional Means-Ends Problem-Solving Procedure; Optional Thinking Test) in order to determine

the relative contribution of these independent measures to the variance in the depression scores of each subject.

The overall results of the study led the authors to note that "the level of self-reported depressive symptoms in non-referred children is significantly related to an external locus of control, negative life events, a select aspect of interpersonal problem-solving, and low socio-economic status" (p. 312). An important additional finding was that depressive symptoms also seemed to be significantly related to documented life stress factors--suggesting a possible causal role for stress in the precipitation of depressive behaviors in children.

Hammen and Zupan (1984) studied a sample of depressed and non-depressed children in an effort to apply Beck's self-schema and information processing constructs to child populations. Noting that theories about self-schema functioning might have important implications for understanding the processes of cognitive bias, the authors designed an experiment where they tested the recall of children grades 3-6 for positive and negative content words. The rationale for the study is conceptually similar to a study by Davis and Unruh (1981) which found that self-schemas played a significant role when adult subjects encoded or recalled personal information. The results of the Hammen and Zupan study

also yielded data which tended to show that the cognitive styles of depressed children were quantifiably different from controls. They found that children appeared capable of differentiating themselves according to specific traits which they perceived as desirable or undesirable; consequently, depressed children tended to describe themselves in more negative terms than did the non-depressed children. The authors concluded that depressed children appeared (like the adults in the Davis & Unruh study) more efficient in processing negatively-toned self-information.

There are conceptual similarities between Beck's (1967, 1972) cognitive theory of depression and the re-formulated model of learned helplessness (Abramson, Seligman, & Teasdale, 1978) which justify references to research regarding childhood depression from a learned helplessness perspective. Essentially, the re-formulated model suggests that people have characteristic attributional styles which are used to explain the causes of good and bad events. The extent to which a person attributes the causes of bad events to internal, stable, and global factors determines the likelihood of feelings of helplessness and depression once a bad event is encountered (Abramson et al, 1978). This attributional style is similar to Beck's (1967, 1976) cognitive

distortion model in that both are thought to predispose to depression. In other words, both theories strongly emphasize the role of conscious thought processes in the emergence of depression.

Seligman and Peterson (1986) conducted a study which was designed to learn more about the relationship between depression and attributional style in children. A sample of elementary children (grades 3-6) completed the Childhood Depression Inventory (Kovacs & Beck, 1977) and the Children's Attributional Style Questionnaire (Seligman & Peterson, 1986). When data from the two instruments were compared, the authors found that attributional style correlated "strongly" with depressive symptoms, and evidence was also identified which suggested that attributional style "for bad events may be a risk factor for later depressive symptoms" (p. 234). More specifically, when compared with non-depressed children, children with depressive symptoms "made more internal, stable, and global attributions for bad events...and more external, unstable, and specific attributions for good events" (p. 239). Interestingly, these characteristics were still apparent upon re-test six months later.

In an extension of this first study, Seligman and Peterson (1986) tested the parents of the children from

the first study using the adult forms of the instruments used in testing children (i.e., Beck Depression Inventory and Attributional Style Questionnaire). They then looked for correlations (between depressive symptoms and attributional style) by contrasting parent and child responses. The results suggested that a "mother's attributional style for bad events and depressive symptoms correlated with her child's corresponding attributional style and her child's depressive symptoms" (p. 244). These findings led the authors to conclude that:

Our results invite the speculation that the vicious circle describing the intrapsychic functioning of the depressive (Beck, 1967) may be embedded within an interpersonal vicious circle. The child may learn attributional style (or depressive symptoms) from its mother, and then the depressions of mother and child may maintain each other, particularly when each possesses the insidious attributional style (Seligman & Peterson, 1986, p. 244).

Interestingly, the authors found that the fathers' depression and attributional style were not related to those of their wives or their children and attributed this to the fact that "mothers probably spend a good deal more time with the children than do fathers" (p. 244).

### Depressed mother-child interactions

A review of the literature suggests that depressive illness severely compromises some mothers' ability to parent effectively. The general consensus is that depressed mothers often respond to and interact with their children in ways which are potentially harmful.

A number of retrospective studies suggest that children raised by depressed parents tend to characterize their childhood interactions with their parents in negative ways. For example, a study by Raskin, Boothe, Reatig, and Schulterbrandt (1971) asked a sample of depressed patients (along with matched controls) to recall salient features of their parents' behavior. The authors reported that the depressed sample had a more negative appraisal of their parents' child-rearing practices than did controls. More specifically, depressives tended to characterize their parents as less involved, less affectionate, and more controlling.

In a more recent study, Crook, Raskin, and Eliot (1981) conducted a study designed to "identify aspects of the early parent-child relationship that may be associated with the development of depressive illness in adult life" (p. 950). Depressed subjects and matching controls completed a questionnaire (a modified version of

the Children's Reports of Parental Behavior Inventory) which was designed to elicit information about parental behavior. Case and control subjects were also interviewed by social workers who collected extensive psychiatric histories and also made global assessments of the quality of early parent-child relationships. An analysis of the resulting data revealed that depressed patients differed significantly in their recall of both maternal and paternal behavior during their early lives. The behaviors that described the mothers of depressed patients tended to reflect a rejecting of the child and other psychologically damaging behaviors such as derision, debasement, withdrawal of affection, and manipulation through the use of guilt and anxiety. These findings led the authors to speculate that "the depressives view of himself as worthless and inferior derives, in part, from early parent-child relationships" (Crook et al, p. 956).

Weissman, Paykel, and Klerman (1972) examined maternal role performance in a group of depressed women along with normal controls. The depressed women were judged by therapist to be moderately to severely depressed using self-report measures along with clinical criteria. The normal sample was randomly selected based

upon no history of psychiatric disturbance, previous psychiatric treatment, or current medical illness. The authors reported "highly significant differences" in parental role functioning between depressed and normal women when their social performance was assessed using the Social Adjustment Scale (a modified version of the Structured and Scaled Interview to Assess Maladjustment). The depressed group reported more difficulties with communication, lessened affection, and more friction when interacting with their children. Mothers in the depressed sample with school-aged children had difficulty becoming significantly involved in their children's lives. The authors noted that "irritability, sensitivity, self-preoccupation, and anergia prevented them from meeting their children's normal demands for attention" (p. 101). More importantly, the authors found that most of the children showed evidence of the impact of their mothers' irritability, withdrawal, and "subtle" rejection. They noted:

Although the child's difficulties were subtly apparent in early latency, were it not for research interest, most of these children might not have come to the attention of mental health or school personnel until the children reached puberty. The children's symptoms were usually hyperactivity or excessive sibling rivalry. Of the 38 children in this age group, 20 were showing some impact from the mother's illness (Weissman et al, 1972, p. 103).



Rogers and Forehand (1983) examined the relationship between parent depression and three dimensions of parent-child interactions: child behavior, parent behavior, and parent perceptions of their children. Citing concepts from Beck et al (1979) regarding the cognitive distortion model, the authors hypothesized that thinking errors might result in distorted perceptions of the child's behavior and general adjustment. The results of the study (using data from a variety of questionnaires) revealed that the more depressed a parent was, the more negatively they viewed their children. The authors felt that their findings suggested that depression is related to parent-child interactions "in terms of parent perceptual processes (e.g., magnification of ordinary child behavior into problems)" (p. 323). They also noted that such a finding "supports the importance attributed by Beck and his colleagues (Beck et al, 1979) to cognitive processes in depression and suggests that therapy involving parents and their clinic-referred children may need a cognitive treatment component for the parents" (Rogers & Forehand, p. 323).

Billings and Moos (1983) conducted a controlled study using a "social-environmental" perspective to examine certain characteristics of depressed-parent-child dyads. Child and parent functioning was gauged using a

variety of indices and criteria. Quality of family environment was also assessed using the Family Environment Scale along with the Dyadic Adjustment Scale. Children of depressed parents (when compared with controls), had substantially more physical and psychological problems including symptoms of depression and anxiety. Moreover, it was found that co-existing high levels of stress and lack of support (reported by the depressed parent) tended to result in greater dysfunction in affected children.

Panaccione and Wahler (1986) examined the interactional behaviors and attitudes of a sample of normal mother-child dyads. Mothers were observed in terms of their affectionate and aversive responses and were asked to report on their own feelings of depression along with judgments regarding their children's behavior. A multiple regression analysis of the resulting data showed a strong relationship between child behavior and the nature of the mother's response to the child. More importantly, it was also found that "mothers' observational judgments about their children had little to do with how the children behaved. Rather, the maternal judgments were best predicted by mother depression" (p. 263). The authors felt that these findings suggested that depression might result in

erroneous evaluations so that the mother "might misjudge her child's physical and psychological needs, thus further contributing to a poor teaching relationship" (p. 265).

Weintraub, Winters, and Neale (1986) conducted a study designed to assess the competence, as indexed by teachers and peers, of children living with a parent with a significant psychiatric disturbance. Four groups of children were investigated: those with a parent with unipolar depression, with bi-polar disorder, with schizophrenia, and a normal control group. The diagnostic assessment battery consisted of a semi-structured interview, the Current and Past Psychopathology Scales; an abbreviated form of the MMPI, the Mini-Mult; interviews with the patients' spouses, and hospital case history. DSM-III criteria were used for diagnosis. Teacher ratings were derived from the Devereaux Elementary School Behavior Rating. Peer ratings were obtained with an instrument constructed by the authors, the Pupil Evaluation Inventory. An analysis of the resulting data showed that children with an affectively disordered parent showed lowered competence "along several dimensions" but especially in the school setting. Teachers characterized these children as more

"deviant"; that is, these children manifested more impulsive and acting-out behaviors and seemed unable to maintain productivity in the classroom. Their peers saw these children as "abrasive, withdrawn, and unhappy." The authors also noted that the deviance shown by children with a depressed parent "extended across a wide range of academic, social, and emotional behaviors" (p. 215). Finally, the authors hypothesized a relationship between competence and depressions-proneness:

Might lowered competence play a role in the development of depression? Recent cognitive theories of depression, based on studies with adult depressives, claim that depressogenic cognitions and attributional styles are instrumental in the development of lowered competence and depressed feelings. Our data suggest that lowered competence, and hence actual failure experiences, might precede the development of depression. That is, a depressed outlook might be a consequence rather than a cause of lowered competence. A high-risk study, with its prospective design, has the potential to unravel this causal chain (Weintraub, Winters, & Neale, 1986, p. 215).

Weissman, Merikangas, Prusoff, John, and Wickramaratne (1985) discovered in a pilot study that children of depressed probands showed a threefold risk of psychiatric diagnosis. More specifically, the rates of depression amongst children of depressed parents were 13.1/100 in a sample of 107 children. Conversely, there

were no cases of major depression in the 87 children of normal parents. To further explore the significance of these earlier findings, the authors evaluated a sample of children of depressed and non-depressed parents. They found the rates of major depression to be similar to those documented in the prior study. Interestingly, the children's reports of depressive symptoms did not correspond to their parents' reports of depressive symptoms in their children. This led the authors to observe that:

While we do not fully understand their clinical significance we cannot ignore the high rates of major depression reported by the children and not by their parents about them. To some extent, this finding, i.e., the higher rates of major depression reported by children about themselves than are reported by mothers about the children, should not be a surprise. In adults, informants or family history almost always yield lower rates than direct interview... However, for detecting early signs and symptoms of disorders the broadest net (the child's report) might be the most suitable (Weissman et al, 1985, pp. 13-14).

In a related study, Weissman, John, Merikangas, Prusoff, Wickremaratne, Gamon, Angold, and Warner (1986) examined various characteristics (i.e., developmental history, behavior, psychopathology symptoms) among a sample of children of parents who were depressed or those with no psychiatric disorder. The findings demonstrated that major depression in a parent is associated with a variety of health and behavior problems in the case

sample of children. For example, the risk of major depression, anxiety, and other psychiatric disorders was significantly greater among children of depressed parents. The authors concluded that "these findings have direct clinical implications for children, and highlight the importance of psychiatric status of parents as risk factors" (Weissman et al, 1986, pp. 11-12).

The relationship of locus of control, anxiety,  
and self-esteem to depression: An overview  
of research regarding theoretical,  
clinical, and measurement issues

A review of the literature reveals that there are connections between depression and other constructs such as self-esteem, anxiety, and locus of control. For example, observations made by Beck and Emery (1985) suggest that there is a cognitive overlap between anxiety and depression in that a depreciated self-concept, negative predictions, and negative bias can be documented in both conditions. Beck and Emery (1985) have also observed that:

For the anxious individual, most life situations pose a threat because "inadequate" performance makes him feel constantly vulnerable to negative evaluation and rejection. The notion of vulnerability may progress into the concept of ineffectuality, which leads to ideas of quitting, of

abandoning normal goals and the prospect of getting normal rewards. At this point, the self-concept has moved from anxious to depressive (p. 101).

From another perspective, Jacobson (cited in Formanek & Gurian, 1987) established a dynamic link between vulnerability and difficulty with the maintenance of healthy self-esteem. She believed that children raised in the presence of severe parental depression become "narcissistically vulnerable" adults. That is, children raised in such environments do not develop stable, positive images of themselves and often experience feelings of shame and inferiority which disrupt the maintenance of self-esteem.

Empirical studies have established a link between depression and an individual's perception of control. For example, Leggett and Archer (1979) examined the relationship between locus of control and two measures of depression using psychiatric inpatients. Noting that the locus of control construct has been defined as "the degree to which an individual maintains a generalized expectancy to exercise internal or personal control over important reinforcers in their life (internally oriented) or perceives these contingencies as externally controlled" (p. 835), the authors also cite previous studies which had shown a relationship between greater externality and higher levels of psychopathology (e.g.,

Lefcourt, 1976; Strickland, 1978). To further test these correlations, the authors administered the Rotter Locus of Control Scale, the Beck Depression Inventory, and the Minnesota Multiphasic Personality Inventory Depression Scale to a sample of male and female adult inpatients suffering from a variety of psychiatric disorders. The findings showed a clear relationship between greater externality and depression. The authors hypothesized that "it is also possible that increased levels of depression may serve to shift the individual's locus of control to a more external orientation...thus, externality may be a reflection of the individual's feelings of helplessness and pessimism" (Legget & Archer, 1979, p. 837).

Burger (1984) conducted research designed to further clarify two personality constructs (desire for control and locus of control) and depression. Noting that previous researchers (e.g., Lewisohn et al, 1981) had identified empirical and methodological difficulties when attempting to establish a link between cognitions and depression, the author offered an alternative method:

One approach to resolving this difficulty is the examination of general cognitive styles. That is, certain individuals may exhibit general, stable patterns of cognitions that theoretically are related to depression. This cognitive style might



then lead the individual into susceptibility to depressive episodes...Perhaps certain individuals tend to think in ways that make them increasingly susceptible to depressive episodes when faced with certain types of situations (p. 72).

The author administered the Beck Depression Inventory, the Desirability of Control Scale, and the Levenson Locus of Control Scales to a volunteer sample of college undergraduates and then re-tested six months later. The results of the study showed some support for the notion that general differences in locus of control and desire for control were related to the experience of depression reported by some of the participants. It was also noted that amongst this population that depression levels remained "fairly stable over the six months period and the relation between depression and the individual difference variables also remained fairly stable during this period" (p. 84). In further analyzing his data, the author concluded:

The general pattern that appears to be associated with depression is a perception that one has little control over the events in one's life, that these events are instead under the control of powerful others and/or chance. The perception that chance controls a great deal of one's life was an especially strong correlate with both initial and later levels of depression. This finding is consistent with observations about the behaviors and statements of depressed individuals (cf. Beck, 1972) and with theories of depression (e.g., learned helplessness) that stress the perception of a lack of personal control as a central factor in the development and maintenance of depression (Burger, 1984, p. 84).

Costello (1982) also examined the relationship between locus of control, depression, and age in three groups: depressed female outpatients, non-depressed controls, and a sample of undergraduate volunteers. Subjects were given the Beck Depression Inventory and also completed the Locus of Control Scale. For the whole sample, depression and locus of control were correlated. Age was negatively associated with locus of control. The author also discovered that the relationship between externality was most evident in the depressed female psychiatric outpatients. Interestingly, age did not appear to be a significant factor; for example, non-depressed women with similar socioeconomic backgrounds had "a much more internal locus of control score than the depressed women" (Costello, 1982, p. 342).

Thyer and Papsdorf (1981) devised a correlational study based upon the premise that "irrational beliefs" are associated with psychopathology. Noting that other studies (e.g., Goldfried & Sobocinski, 1975; Himle, Thyer, & Papsdorf, 1980) had established correlations between anxiety and irrationality, the authors recruited a sample of female undergraduates and administered the Rational Behavior Inventory, The Zung Self-Rating Depression Scale, the Internal-External Locus of Control Scale, and the State-Trait Anxiety Inventory to all

subjects. Correlations were calculated between each of the psychological measures and scores on the Rational Behavior Inventory--a test which yields "an overall index of the rationality of a person's belief systems as defined by Ellis' system of rational emotive therapy" (p. 256). An analysis of the data revealed negative correlations; that is, higher rationality scores were associated with internal locus of control and lowered depression and anxiety symptoms.

Kawash (1982) did a structural analysis of self-esteem using three age samples: children, adolescents, and young adults. Employing three personality scales designed to measure similar dimensions in the targeted age ranges, the author was interested in seeing how measures of self-esteem correlated with primary factors from the various personality scales. The author found considerable stability in the structure of self-esteem across age ranges. Moreover, the author observed a pattern of relationships between anxiety, extraversion, and self-esteem. Subjects with high self-esteem scores also reported less anxiety and more comfort in social situations. Conversely, subjects with low self-esteem endorse more anxiety items and reported greater discomfort in social interactions.

Ollendick (1979) examined a sample of elementary school children and their parents in an effort to learn more about the hypothesized relationship between "parental locus of control orientations" and certain aspects of their children's personality characteristics (e.g., locus of control, anxiety, intelligence, achievement, and behavioral adjustment). Data for the child sample was derived from the Nowicki-Strickland Locus of Control for Children (Nowicki & Strickland, 1973) and the trait portion of the State-Trait Anxiety Inventory for Children. The Locus of Conflict Rating Scale was also used to assess behavioral adjustment in school. Additionally, intelligence and achievement data from school records were also compiled. The parents completed the Nowicki-Strickland Locus of Control Scale for Adults and an additional rating of their child's behavioral adjustment using a revised Locus of Conflict Rating Scale. The results suggested differences between girls and boys regarding correlations. For example, girls' locus of control and anxiety scores were significantly correlated with both their mothers' and fathers' locus of control scores. The boys' intelligence, achievement, and behavioral adjustment were also significantly correlated with mother's locus of

control. No significant relationship was found between fathers' locus of control and locus of control scores for either boys or girls. Interestingly, the author did note that locus of control was correlated with anxiety when all the children's variables were analyzed. More importantly, the author also discovered that children with two externally controlled parents were more anxious than children with only one. The author concluded that:

In this regard, the relationships between parental locus of control and specific childrearing attitudes and behaviors needs to be investigated. It would seem most plausible that external locus of control parents are those who are the most inconsistent in their parenting attempts (Ollendick, 1979, p. 404).

Norvell, Brophy, and Finch (1985) investigated the relationship between anxiety and depression in a sample of hospitalized children. Subjects were evaluated using the Children's Manifest Anxiety Scale, the State-Trait Anxiety Scale for Children, and the Children's Depression Inventory. An analysis of the data found a significant relationship between anxiety and depression. More significant however was the discovery that certain factor-analyzed variables from the anxiety scales seemed to have a stronger correlation to depression scores than did others. This led the authors to conclude that "there are inherent difficulties in trying to predict a global

construct, such as depression, from another global construct such as anxiety" (Norvell, Brophy, & Finch, 1985, p. 152).

Reynolds, Anderson, and Bartell (1985) evaluated various measures of depressive symptomology in children as well as two related constructs: self-esteem and anxiety. Using a sample of elementary school children (grades 3-6), the authors administered two self-report depression measures (Children's Depression Inventory, and the Child Depression Scale, along with anxiety and self-esteem scales (i.e., Self-Esteem Inventory and Children's Manifest Anxiety Scale-Revised). Additionally, parents were asked to rate their children on the anxiety and depression scales from the Personality Inventory for Children. Teachers were asked for "global ratings" of depression and school performance. The results of regression analysis (with depression as the dependent variable and anxiety and self-esteem as independent variables) showed a strong relationship between depression and the "cumulative relationship of anxiety and self-esteem" (p. 521). The strong correlations reported between the two self-report depression scales along with predicted associations between depression, anxiety, and self-esteem led the

authors to conclude that self-report appeared to be a valid and reliable method with child populations (Reynolds, Anderson, & Bartell, 1985).

Research efforts by Saylor and his colleagues are especially relevant given their specific focus on methodological and psychometric issues regarding childhood depression and related constructs. Saylor, Finch, Spirito, and Bennet (1984) conducted a series of studies designed to assess the criterion and concurrent validity of the Children's Depression Inventory using various groupings of hospitalized children and adolescents. The CDI appeared to be distinguished by its strong internal consistency with both clinical and normal populations. Moreover, concurrent validity showed significant correlations with other self-report measures designed to assess other constructs such as self-esteem, locus of control, and anxiety. That is, high depression groups reported lower self-esteem, more externality, and more trait anxiety when compared with low depression groups.

Saylor, Finch, Baskin, Furey, and Kelly (1984) tested the construct validity of certain measures of childhood depression by applying a multitrait-multimethod technique. Noting that "one of the remaining potential sources of error variance in the study of depression in

children is different types and sources of information that are commonly utilized in making the diagnosis" (p. 977), the authors administered a self-concept scale (Piers-Harris Self-Concept Scale), a depression scale (Children's Depression Inventory), and an instrument designed to measure causal attributions to a sample of hospitalized children ages seven to fifteen. Additional diagnostic ratings were elicited from clinical staff regarding depressive symptoms. An analysis of the findings revealed that the "source of the data" determined the significance of correlations.

Specifically, the authors found that:

Self-report measures correlated for the most part with one another (even when criteria were not identical--e.g., depressive symptoms on CDI vs. self-concept on Piers-Harris vs. attributional style on the KASTAN) but failed to correlated significantly with any of the reports from other information sources (p. 979).

Furthermore, when the authors tested a large sample of normal children with self-report measures designed to measure depression, anger, happiness, and popularity (multi-method, multitrait), they found that "measures of similar constructs tended to coincide, and measures of the same construct tended to correlate more consistently with one another than with measures of a different construct" (p. 983). The authors acknowledged the inherent difficulty in either selecting a construct that



was independent of childhood depression or in selecting measures that actually measure depression per se. Even though there were discrepancies in self-reported symptoms and ratings provided by clinical staff, the authors concluded that:

Even though children's accounts of their depressive symptomology may not coincide with the behaviors observed or reported by others, they are consistently reported by the children themselves across self-report measures and should be respected. The strong correlation among measures from the same source may not only reflect a responder bias and a similarity in the content sampled in those inventories, but may also reflect the inability of outsiders to see certain cognitive and affective events (Saylor et al, 1984), p. 984).

#### Summary

A review of the literature on childhood depression revealed many competing theoretical positions and a body of empirical findings which was quite varied and sometimes contradictory. Some researchers (e.g., Gittelman-Klein, 1977; Rutter, 1966) have noted methodological flaws in much of the research on depressive symptoms in children, primarily because of weak diagnostic criteria and a failure to use normal controls.

Research has identified certain cognitive traits in depressed persons which were similar to those described by Beck and his collaborators. However, the role of

cognitions in the etiology of depression has not been fully explored. It is still not clear whether distorted thinking is a cause or a product of depression.

Some researchers shifted their focus toward risk and vulnerability issues by studying the children of parents with affective disorders. Research on depressed mother-child interactions strongly suggested potentially serious psychological consequences for children living with a depressed mother. Interestingly, some investigators (e.g., Weissman, 1979; Rutter, 1986) noted that these consequences might not be discernible until later in development, perhaps not until adolescence or early adulthood. Consequently, there appeared to be a need to develop additional diagnostic screening procedures which might further aid in the identification of children who might be at risk by virtue of having a depressed parent. A number of studies found associations between depression and other constructs such as anxiety, self-esteem, and locus of control. Instruments designed to measure these constructs were useful in discriminating between clinical and normal populations of adults and children. However, there was some disagreement among investigators as the efficacy of the self-report method.

## CHAPTER III

### Methodology

#### Population and selection of sample

This study used volunteer participants drawn from several sources. The majority of the case mothers came from a population of women receiving treatment in the various satellite clinics of a large public mental health agency located in central Virginia. Because sufficient numbers of volunteers could not be located from these sources, additional volunteers were found in various private agencies also located in the same geographical area. Therapists in both public and private offices were given an overview of the intent and nature of the research and each was asked to submit names of prospective candidates based upon the following preliminary criteria:

1. The client must have indicated her willingness to be considered for the research project by having signed a preliminary consent form.
2. Potential candidates had to have a child falling in the designated age range of seven to nine years.
3. A diagnosis of either major depression or dysthymia had to be evident in the client's confidential record.

4. Prospective mothers could not have prior or co-existing diagnoses of psychotic disorders (e.g., schizophrenia or bi-polar disorder) or could not carry a diagnosis of borderline personality.

5. Mothers having exceptional children could not be included (i.e., children with severe emotional disturbance, mental retardation, or learning disabilities).

Subjects in the control sample consisted of volunteers recruited from two large elementary schools also located in the same geographical area. By targeting primary level schools, the children of these volunteers also met the age range criterion established for the case-cohort sample. Prospective mothers were accepted into the control group on the basis of: (1) having no history of depressive illness; and, (2) the absence of significant current symptoms as determined by a self-report depression inventory.

The final case-cohort group contained 26 mothers and children. The final control-cohort group contained 30 mothers and children. Case and control mothers were also asked to provide information regarding (1) marital status, (2) educational level, and, (3) family income.

Frequency tables were constructed using these demographic variables with the following results: Depressed mother mean age - 33.5 years; mean age of nondepressed mothers - 35.8 years; mean age of case children - 8.3 years; mean age of control children - 8.0

years; 30 percent of depressed mothers reported family income in low bracket (< \$15,000); 53 percent fell in moderate income bracket (\$15,000-\$40,000); 17 percent were in the high income range (\$40,000+); 53 percent of nondepressed mothers reported family income in moderate range; 47 percent reported income in high range.

Educational levels were assigned using a graduated numerical rating 1 through 5 (e.g., 1 = less than high school, 5 = graduate degree). Mean educational level for nondepressed mothers was 3.0, and 2.7 for depressed mothers. There were 17 boys and 9 girls in the case group. There were 19 boys and 11 girls in the control sample of children.

#### Data gathering methods

Prior to participation in the study, mothers in the case and control groups signed consent forms granting permission for the evaluation of themselves. Children were also required to sign separate permission forms.

Case mothers were told that the intent of the research was to learn more about the similarities in the thinking styles of mothers and their children. Control mothers were told that the purpose of the study was to learn more about how depression in a parent affects the

developing beliefs and attitudes of children. Mothers in the case sample were told that the resulting data could be shared with their therapists with their permission. Unless specifically requested, the data from the control sample was not shared with participants; instead, arrangements were made to give participants an overview of the findings as part of a special presentation regarding mother-child relationships scheduled for each participating school.

Data from the self-report depression inventory was used for screening purposes only--scores from this test did not figure into the final analysis of data. All participants were asked to complete a battery of self-report measures designed to elicit information regarding self-esteem, locus of control, and anxiety. These tests will be described and evaluated in a subsequent section of this chapter.

#### Ethical safeguards and considerations

In addressing ethical and confidentiality issues, several considerations were employed prior to, during, and following the study in order to accomplish the following:

- protect the rights of all participants,
- insure the opportunity for all participants to receive assistance as a result of this study,
- maintain confidentiality and participant anonymity to the fullest extent possible.

These considerations were implemented as follows:

(a) The School Board and Superintendent of Prince George County Schools reviewed and authorized the use of school division students in the research project.

(b) This research project received approval from the human research review committee of the College of William and Mary.

(c) This study complied with specific guidelines set forth in District 19 Mental Health Services policy.

(d) District 19 Mental Health Services policy also requires prior approval of any research involving clients by a designated human research committee from within the organization. This project was reviewed and approved by the members of that committee.

(e) In the event that significant emotional maladjustment was discovered in the control sample of mothers or children, contingency plans were in place to insure that appropriate interventions might occur (e.g., consultation with parent regarding advisability of treatment along with treatment resources).

(f) All test data was confidential. School personnel did not have access to findings regarding children. Control sample protocols were destroyed after completion of this project. Protocols from the case sample were either destroyed or became part of the client's confidential record with the client's prior approval.

### Instruments

#### Beck Depression Inventory

The BDI is the most frequently used self-report method for assessing the severity of depressive symptoms. This 21 item scale was originally designed to be interviewer assisted, but it is now more common to have clients complete the test without assistance. Each item of the inventory consists of four self-evaluative statements scored 0 to 3, with higher scores indicating greater severity of depression. Responses are added to yield a total score, ranging from 0 to 63. BDI scores are generally classified into levels of depression as follows: 0-9 indicates normal non-depressed state, 10-15 reflects mild depression, 16-23 reflects moderate



depression, and 24-63 reflects severe depression (Shaw, Vallis, & McCabe, 1985).

Split-half reliability coefficients have been reported in the range of .58 to .93 (Beck & Beamesderfer, 1974; Gallagher, Nies, & Thompson, 1982; Reynolds & Gould, 1981). Test-retest reliability has varied from .69 to .90 depending upon the source (Gallagher et al. 1983; Strober, Green, & Carlson, 1981). In terms of concurrent validity, empirical studies have suggested a fairly strong correlation between the BDI and clinicians' ratings of severity of depression (Beck et al, 1961; Bumberry, Oliver, & McClure, 1978; Metcalfe & Goldman, 1965; Strober et al, 1981). The BDI's correlation with other depression inventories such as the Zung Self-Rating Depression Scale, the Depression Adjective Checklist, the Depression Scale of the Minnesota Multiphasic Personality Inventory, and the Hamilton Rating Scale for Depression has been reported as moderate to good (Bloom & Brady, 1968; Burkhart, Gynther, & Fromuth, 1980; Nielson, Secunda, Friedman, & Williams, 1972).

### Self-Esteem Inventory

The School Form of the SEI is designed for use with children aged 8-15. This self-report measure has 58

items: 50 self-esteem statements and 8 items which represent the Lie Scale--an index of defensiveness. The child responds by indicating whether each statement is "Like me" or "Unlike me". The self-esteem items yield a total score, and also separate subscale scores for the following categories: General Self, Social Self-Peers, Home-Parents, and School-Academic. High scores (maximum total score of 100) correspond to high self-esteem. The author reports that means have generally been in the range of 70 to 80 with a standard deviation of 11 to 13 (Coopersmith, 1981). Coopersmith also notes that while "there are no exact criteria for high, medium, and low levels of self-esteem,...the upper quartile generally can be considered indicative of high self-esteem, the lower quartile generally indicative of low self-esteem, and the interquartile range generally as indicative of medium self-esteem" (Coopersmith, 1981, p. 8).

Internal consistency studies reported by the author (i. e., Spatz & Johnson, 1973; Kimball, 1972) yield reliability coefficients ranging from .81 to .92 for students of different ages and ethnic backgrounds. Test-retest correlations cited by the author range from .42 to .64. Shavelson, Hubner, and Stanton (1976) reported internal consistency reliabilities for the four subscales ranging from .28 to .82 for boys and girls in

grades 3-11. However, total score test-retest reliability coefficients ranged from .70 to .88, leading the authors to conclude that global scores were more dependable and stable than subscale scores.

Coopersmith also cites a number of studies which lend support to the validity of the SEI. A study by Kokenes (1978) yielded associations between SEI self-esteem scores and personal estimates of the importance of home, peers, and school. Kimball (1972) compiled norms by grade and sex for children grades 4-8 and found "a consistency of score values at a given percentile regardless of the population" (cited in Coopersmith, 1981, p. 13).

Coopersmith reports a study by Cowan, Altmann, and Pysh (1978) which compared the SEI to other self-report measures (i.e., Bledsoe Self-Concept Scale, Piers-Harris Childrens' Self-Concept Scale, and the Purdue Self-Concept Scale) and found evidence of validity because of the "significant correlations" between these self-report instruments" (cited in Coopersmith, 1981, p. 14).

Self-Esteem Inventory - Adult Form

The SEI is a self-report measure consisting of 25 items adapted from the SEI School Short Form. It is designed for use with subjects 15 and older. The format is the same as with the School Form. The user responds to each statement with either "Like me" or "Unlike me." Norms for the Adult Form were derived from a sample of college students (N=226). Mean scores for the population showed little variation when sex or ethnicity were considered.

Ahmed, Valliant, and Swindle (1985) factor analyzed the responses of a sample of adults using the SEI. Additionally, scores from the SEI were correlated with other similar scales to "gain insight into content and the essential construct of the scale" (Ahmed et al, p. 1235). The results of the factor analysis revealed the SEI to have four factors: (1) view of life; (2) family relations, (3) tolerance and confusion level; and, (4) sociability. Despite this evidence suggesting heterogeneity, the authors did find that the SEI correlated negatively with other scales measuring guilt and anxiety which was used as evidence supporting construct validity.

Childrens' Nowicki-Strickland Internal-External Locus of Control

The CNSIE is a 40-item forced choice (Yes-No) self-report scale designed to "assess the construct of locus of control of reinforcement" (Nowicki & Strickland, 1988, p. 2). The authors indicate that this test is appropriate for children aged 9-18; however, they report norms for children as young as 7. Depending on the item, a positive or negative response may denote an external or internal directionality. However, the actual score is the total number of items answered in an externally controlled direction.

To obtain reliability, demographic, and construct information, the scale was administered to a large sample (N-1017) of children in grades 3-12. The authors report split-half reliability coefficients of:  $r = .63$  (grades 3, 4, 5);  $r = .68$  (grades 6, 7, 8);  $r = .74$  (grades 9, 10, 11); and,  $r = .71$  (grade 12). Nowicki and Strickland (1973) also report test-retest reliabilities using three grade levels (six week interval) of: .63 for third grade, .66 for seventh grade, and .71 for tenth grade.

In terms of convergent validity, the authors report data suggesting "moderate relations" between the CNSIE and other measures of locus of control (e.g.,  $r = .41$ ,

with the Bialer-Cromwell Scale using a sample of children aged 9-11). To further bolster the evidence for construct validity, the authors also cite a variety of studies which have found associations between locus of control and self-esteem, popularity, anxiety, and interpersonal distance (Nowicki & Strickland, 1988).

Allie (1979) did a factor analysis of the CNSIE using children referred to a treatment center for adjustment problems. The resulting data revealed two factors centering around two kinds of helplessness: (1) a lack of control in social relationships; and, (2) a lack of control over "things or situations." These factors were similar to those found in a study by Mirels (cited in Allie, 1979) who found two internal-external factors: (1) a general belief concerning mastery in life experiences; and, (2) a belief regarding personal efficacy in "political" situations.

#### Adult Nowicki-Strickland Internal-External Locus of Control

The ANSIE is a 40-item forced-choice scale which represents an upward extension of the CNSIE. The two scales are essentially the same except the wording of some items has been changed on the ANSIE to reflect a more adult-like perspective.

The authors report split-half reliabilities "in the .60s" for college and community samples. Other cited studies reported similar reliability coefficients. Nowicki and Strickland (1988) report test-retest reliability for college subjects (six week interval) of .83. Other researchers (Chandler, 1976; Mink, 1976) also reported similar reliability coefficients.

To further test the construct validity of the ANSIE, the authors administered the ANSIE and the Rotter I-E Scale to two college and community adult samples. Correlations ranged from .48 to .68. Other cited researchers found similar associations (e.g., Nemeo, 1973; Remainis, 1974; Jones, 1976).

Kearney and Kearney (1983) investigated sex differences, item consistency, and factor patterns of the ANSIE. The responses of college students (85 males and 108 females) were subjected to factor analysis. Three factors were evident for females and five for males. The first two factors were identical for both sexes and involved powerlessness in social situations and helplessness in family interactions. The third factor for females involved futility, while for males the final three factors were hard work, luck, and futility. The authors concluded that the ANSIE "has a consistent subfactor structure and that it is a more dependable

instrument for the exploration of nuances in locus of control" (Kearney & Kearney, 1983, p. 421).

Finch, Kendall, Spirito, and Mikulka (1981) also did a factor analysis of the ANSIE using the responses of undergraduate psychology majors (N=120). Five distinct factors were identified which were related to such issues as vulnerability, social power, belief in luck, futility, and unfair contingencies. The authors noted that these factors resembled those identified by other researchers (e.g., Chandler & Dugovics, 1977; Kendall, Finch, Little, Chirco, & Ollendick, 1978) who had isolated factors in the ANSIE related to personal control and helplessness.

#### State-Trait Anxiety Inventory

The STAI is a 40-item self-report measure designed to elicit information regarding a person's level of both state and trait anxiety. The 20 state-anxiety items are rated on the following four point intensity scale: "Not At All"; "Somewhat"; "Moderately So"; "Very Much So." The 20 trait-anxiety scale items are rated on a four point frequency scale as follows: "Almost Never"; "Sometimes"; "Often"; and, "Almost Always." The state-anxiety items ask the respondent to describe how



"he feels right now"; the trait-anxiety items ask how "the subject generally feels." Scores on the STAI have a direct interpretation: high scores on either scale indicate greater state or trait anxiety (Spielberger et al, 1970).

Norms for the STAI were derived from two populations: (1) working adults (N-1838); and, (2) college students (N-855). The author provides extensive percentile rankings broken down by age and sex for these populations along with high school students and military recruits.

The test-retest correlations for the trait-anxiety scale (for college students) ranged from .73 to .86 depending on length of test-retest interval. The authors explained the conspicuously lower reliability coefficients for state-anxiety by saying that this scale was designed to measure "transient situational factors."

Construct validity data was established by correlating the trait-anxiety: the Taylor Manifest Anxiety Scale; the IPAT Anxiety Scale; and the Zuckerman Affective Adjective Checklist. The correlations between these instruments and the STAI ranged from .52 to .80.

### State-Trait Anxiety Inventory for Children

The STAIC represents a downward extension of the STAI (Spielberger et al, 1970) and was initially developed as a research tool for the study of anxiety in elementary school children. The STAIC is quite similar to the STAI in structure and is scored in an identical manner. Although specifically developed for children 9-12, the authors report that "younger children with average or above average reading ability are also eligible" (Spielberger, Edwards, Lushene, Montuori, & Platzek, 1973, p. 3).

The normative data for the STAIC are based on two samples of elementary school children in grades 4-6. The authors provide normalized T-scores for both state and trait-anxiety for these samples.

In reporting reliability coefficients, the same pattern of stronger trait as opposed to state correlations is evident also with the STAIC. Trait anxiety coefficients ranged from .65 to .71 (depending on sex) while state-anxiety correlations varied from .31 to .47 in test-retest comparisons.

Evidence of concurrent validity was provided by correlating the trait-anxiety scale of the STAIC with two other measures of trait-anxiety in children--the

Children's Manifest Anxiety Scale, and the General Anxiety Scale for Children. In a sample of 75 children, the STAIC anxiety-trait scale correlated .75 and .63 with these instruments respectively.

Other researchers have found that the STAIC may be useful in discriminating normal from clinical populations of children (e.g., Thyer & Papsdorf, 1981; Ollendick, 1979; Norvell, Brophy, & Finch, 1985).

### Hypotheses

This study used two dyadic groupings to measure certain variables hypothesized to be associated with depression. Expected relationships were hypothesized as follows:

Hypothesis 1. Case-mothers will have significantly lower self-esteem than control-mothers.

Hypothesis 2. Control-cohorts will have significantly higher self-esteem than case-cohorts.

Hypothesis 3. Case-mothers will have significantly higher trait-anxiety than control-mothers.

Hypothesis 4. Control-cohorts will have significantly lower trait-anxiety than case-cohorts.

Hypothesis 5. Case-mothers will be significantly more external in their locus of control than control-mothers.

Hypothesis 6. Control-cohorts will be significantly more internal in their locus of control than case-cohorts.

Hypothesis 7. Case-mother and case-cohort profiles will show significant correlations.

Hypothesis 8. Control-mother and control-cohort profiles will show significant correlations.

#### Statistical analysis methods

This investigation was correlational in design and involved an assessment of case and control samples comprised of depressed and non-depressed mothers and their respective children. The classification variable for this study was maternal depression. The predictor variables were measures of self-esteem, locus of control, and anxiety. Two correlational matrices were created (one for the depressed dyad, the other for the control dyad) in an effort to find significant correlations using predictor variable scores.

In order to determine how the two groups related to each other with regard to these variables, mean scores for case and control groups were compared using t-tests.

### Summary of methodology

This research investigation created a case dyadic grouping based upon two criteria: (1) documented depression in the mother; and, (2) a cohort in the designated age range of 7-9 years. The control group was formed by using the following criteria: (1) no history or current depression in the mother; and, (2) a cohort in the same age range of 7-9 years.

Adult participants completed self-report instruments designed to measure locus of control, anxiety levels, and self-esteem. The child participants completed the child versions of these same instruments.

The statistical analysis of the data was designed to detect differences and similarities within and between these two dyadic groups in terms of specified dependent variables.

## CHAPTER IV

### Results

The data from this study was analyzed using the Statistical Package for the Social Sciences (SPSSx, SPSS Inc., 1983). The statistical analysis of the data was designed to accomplish two basic goals: (1) to document significant differences between groups using dependent variable measures; and, (2) to identify significant correlations within groups by comparing dependent variable scores for each mother and her respective child (for both cases and controls). The significance of differences in mean scores was determined by the use of t-tests for the first six hypotheses. The Pearson product-moment correlation method was used for Hypotheses seven and eight. A 0.05 level of confidence was the criterion point for acceptance or rejection of the hypotheses.

Certain preliminary adjustments were needed before the data could be analyzed. One problem was that the School Form of the SEI contained 33 more items than the Adult Form of the SEI. However, the first 25 items of the school Form (called the Short Form) are virtually

identical to the 25 items which comprise the Adult Form. Consequently, it was decided that Short Form scores would be most relevant for statistical comparisons.

The scoring scales for the adult and child versions of the STAI were different. The score range for the adult form is 0-80 and 0-60 for the child form. Before comparisons were made, all adult and child trait-anxiety scores were converted to standard scores using tables located in each test manual. Also, it was decided not to incorporate state-anxiety scores into the analysis of data due to the unstable psychometric properties of this particular measure.

#### Hypothesis One

Hypothesis one stated that depressed mothers would have significantly lower self-esteem than control mothers (as measured by the SEI). To test this hypothesis, mean SEI scores for these two groups were analyzed by the t-test method. This analysis revealed a significant difference between depressed and non-depressed mothers when mean scores were contrasted ( $t = 8.09$ ,  $df = 54$ ,  $p < .0001$ ). Therefore, hypothesis one was supported (see Appendix A for means and standard deviations).

### Hypothesis Two

Hypothesis two stated that the children of non-depressed mothers would have significantly higher self-esteem than children of depressed mothers (as measured by the Short Form of the SEI). In order to test this hypothesis, the mean scores of these two groups were subjected to a t-test analysis. The results revealed that control children did have significantly higher SEI scores as a group than did the children of depressed mothers ( $t = 2.77$ ,  $df = 54$ ,  $p < .001$ ). Hypothesis two was therefore supported.

### Hypothesis Three

Hypothesis three stated that depressed mothers would have higher trait-anxiety than control mothers. To test this hypothesis, the mean trait scores for these two groups were contrasted using the t-test method. The results revealed that depressed mothers did have significantly higher STAI trait-anxiety scores as a group than did the control group of mothers ( $t = 6.16$ ,  $df = 54$ ,  $p < .0001$ ). Means and standard deviations are contained in Appendix A. Hypothesis three was therefore supported.



#### Hypothesis Four

Hypothesis four stated that children of non-depressed mothers would have significantly lower trait-anxiety than children of depressed mothers (as measured by the STAIC). A t-test analysis of mean trait-anxiety scores did not yield significant differences between the two groups of children on this particular measure ( $t = 1.60$ ,  $df = 54$ ,  $p = .115$ ). Hypothesis four was therefore not supported.

#### Hypothesis Five

Hypothesis five stated that depressed mothers would be significantly more external in their locus of control when compared with control mothers (as measured by the ANSIE). An analysis using the t-test method revealed that depressed mothers did endorse more externally-oriented items on the ANSIE than did control mothers ( $t = 3.60$ ,  $df = 54$ ,  $p < .001$ ). Hypothesis five was therefore supported.

#### Hypothesis Six

It was hypothesized that the children of non-depressed mothers would demonstrate more internality

in locus of control when compared with children of depressed mothers (as measured by the CNSIE). This hypothesis was also tested using the t-test method but did not result in significant differences in the mean scores of the two groups ( $t = .58$ ,  $df = 54$ ,  $p = .561$ ). Hypothesis six was therefore not supported.

#### Hypothesis Seven

Hypothesis seven stated that there would be significant positive correlations between the scores of depressed mothers and their respective children on the three dependent variables measures (i.e., SEI (adult) to SEI (child); STAI to STAI-C; ANSIE to CNSIE).

A correlational matrix was constructed using the Pearson product-moment correlational method. The intent here was to document case by case "matching" rather than examining group means. An analysis of correlational values revealed a significant positive correlation in the self-esteem scores of depressed mothers and their respective children ( $r = .47$ ,  $p < .01$ ). On the other hand, there was no significant relationship between mother and child locus of control scores ( $r = .025$ ,  $p = .452$ ). The trait-anxiety scores for depressed mothers and their children did show a positive

correlation but not at the designated .05 confidence level ( $r = .30$ ,  $p = .066$ ). Hypothesis seven was therefore only partially supported.

#### Hypothesis Eight

Hypothesis eight stated that there would be significant positive correlations between the scores of non-depressed mothers and their respective children in the same manner described in hypothesis seven.

An analysis of correlational values yielded evidence which generally supported hypothesis eight. Mother and child self-esteem scores (as measured by the SEI) were significantly correlated ( $r = .56$ ,  $p < .001$ ). The trait anxiety scores (as measured by the STAI and STAIC) also showed a significant positive correlation ( $r = .49$ ,  $p < .003$ ). There was no significant relationship in the locus of control scores of control mothers and their children ( $r = .12$ ,  $p = .262$ ). These correlational relationships provided substantial although not complete support for hypothesis eight.

### Summary

Depressed mothers were significantly different from control mothers on all dependent variable measures. Control and case children differed significantly on the measure of self-esteem. A correlational analysis of mother-child profiles revealed that depressed mothers and children correlated significantly only on the self-esteem measure. Non-depressed mothers and children showed significant correlational relationships on the self-esteem and trait-anxiety measures. The mean scores of case and control children were quite similar on the measures of locus of control and trait-anxiety.

## CHAPTER V

### Summary, Conclusions, Discussion, and Recommendations

This final chapter provides a summary of the present investigation, states the findings according to hypotheses, and discusses the results and conclusions. Recommendations for future research are offered as well.

#### Summary

The ambiguous and sometimes contradictory findings in those studies attempting to document depression in children have led some investigators to focus more on depressed mother-child interactions in order to gain further insight regarding etiological and risk factors (Orvaschel, 1983; Beardslee, 1986; Rutter, 1986; Weissman et al, 1985).

In an effort to learn more about the impact of maternal depression on the developing feelings and attitudes of affected children, this study used measures of self-esteem, locus of control, and anxiety to contrast the thinking styles of depressed mothers with those of their children, and then compared these profiles with

those of a control group of mothers and children. The selection of these particular dependent variables was largely determined by previous research which had demonstrated an empirical link between depression and such constructs as self-esteem, anxiety, and locus of control.

Mothers were admitted to the depressed group if they were currently in treatment for either major depression or dysthymia (as specified by diagnostic criteria found in the DSM-III-R). Significant current depressive symptoms also had to be documented in the candidate's BDI protocol. Mothers with a co-existing or prior diagnosis of psychotic disorder were excluded along with those women carrying a diagnosis of borderline personality disorder. Mothers for the control group could have no history of depression or other significant psychiatric disorder, and could not demonstrate significant depressive symptoms on their BDI protocols. Children in each group were admitted if they fell within the designated age range of 7 - 9 years. Exceptional children were excluded from this study (i.e., children with documented mental retardation, learning disabilities, or serious emotional disturbance).

The final control group contained 30 mothers and children. The final case group contained 26 mothers and

children. All adult participants completed the State-Trait Anxiety Inventory, the Self-Esteem Inventory, and the Nowicki-Strickland Internal-External Scale. The children in both groups completed the child versions of these same instruments.

The Pearson product-moment correlation method was used to analyze dependent variable score relationships within groups. Between group mean score comparisons were evaluated by t-tests.

#### Statement of findings

The analysis of the statistical data presented in this study yielded the following results:

1. Depressed mothers had significantly lower self-esteem scores (as measured by the SEI) than non-depressed mothers.
2. Children of non-depressed mothers had significantly higher self-esteem scores than children of depressed mothers.
3. Depressed mothers scored significantly higher on the trait-anxiety section of the STAI than did non-depressed mothers.
4. There was no significant difference in the scores of case or control children on the trait-anxiety portion of the STAIC.

5. Depressed mothers endorsed a significantly greater number of external locus of control items on the ANSIE than did non-depressed mothers.

6. There was no significant difference in the locus of control scores of case or control children as measured by the CNSIE.

7. Depressed mother and respective child profiles did not correlate in a uniformly positive manner. Significant correlations were seen in SEI measures of self-esteem and a positive but not significant correlation existed in trait-anxiety scores. There was no significant relationship between mother and child locus of control scores.

8. Non-depressed mother and child SEI scores were significantly correlated. Trait-anxiety scores also showed a significant positive correlation. There was no significant relationship in the locus of control scores of control mothers and their respective children.

### Conclusions

As a consequence of the findings, the following conclusions from the study can be offered:

1. Self-esteem appeared to be a more discriminating variable when both within and between group comparisons were considered. For example, depressed mothers and



their children scored significantly lower on the SEI than did their control counterparts. Additionally, the SEI was the only instrument which yielded a significant positive correlation when the scores of all instruments were compared within the depressed mother-child group.

2. Depressed and non-depressed mothers responded in significantly different ways to the same battery of instruments. Children in both groups tended to respond similarly to measures of trait-anxiety and locus of control so that their scores were not significantly different on these two variables.

3. Non-depressed mothers' and their childrens' profiles tended to show more similarity than did the profiles of depressed mothers and their children. The control group "matched" on self-esteem and trait-anxiety while the case group "matched" only on the self-esteem measure.

4. The locus of control measure appeared to have the least statistical significance when within or between group comparisons were made. Control children did not differ significantly from case children on this particular variable. Additionally, the locus of control scores of children (in both case and control groups) did not correlate with the locus of control scores of their respective mothers.

5. Stated in general terms, the employed instruments resulted in the two adult groups being significantly different on these measures while the child groups showed more similarities than differences (see Appendix A for means and standard deviations).

### Discussion

This research effort focused specifically on depressed mother-child interactions to learn more about the potential cognitive consequences for at-risk children. Beck's cognitive distortion model was operationalized by designating self-esteem, anxiety, and locus of control as hypothesized correlates of cognitive distortion. The choice of these particular variables was influenced by a substantial body of research which had found consistent statistical relationships between depression and these constructs.

The cognitive profiles of depressed mothers, when contrasted with control mothers, yielded expected results. By self-report measure, depressed mothers reported lower self-esteem, higher trait-anxiety, and more external orientation in locus of control. These findings are quite consistent with earlier studies which had also found similar cognitive traits in depressed individuals.

There were also other statistical relationships apparent amongst the dependent variable measures which corroborate earlier research. In both groups of mothers, self-esteem scores were negatively correlated with trait anxiety in a significant manner (depressed mothers,  $r = -.62$ ,  $p < .001$ ; non-depressed mothers,  $r = -.60$ ,  $p < .001$ ). The magnitude of these correlations across groups suggests that there is a relationship between self-esteem and anxiety that may be independent of depression. In other words, there was a tendency for control mothers reporting low self-esteem to also report higher trait-anxiety.

This investigation hypothesized that children of depressed mothers would evidence more trait-anxiety and external locus of control than their control counterparts. The underlying assumption was that the cognitive characteristics of depressed mothers would tend to have a general impact on the attitudes and beliefs of their children so that they would seem substantially different from children of non-depressed mothers. It is not entirely clear why case children did not differ on these variables. It became apparent that demographic variables might have influenced outcomes. For example, both child groups contained nearly twice as many boys as girls (case group: 17 boys, 9 girls; control group; 19

boys, 11 girls). Ollendick's (1979) correlational study of parent-child locus of control and anxiety traits may offer some reasons for sex differences on these particular measures. In his study, he found that girls' locus of control orientation and anxiety levels correlated significantly with their mothers' but no significant correlation existed between boys and their mothers on these variables. Ollendick hypothesized that girls were potentially "more amenable to parental attitudes and behaviors than are boys" (p. 404). It is also relevant to note that the marital status of control mothers differed significantly from depressed mothers. Twenty-nine of the 30 control mothers were married while only 13 of the 26 case mothers had spouses. This raises the question of the potential influence of fathers on the child attitudes and beliefs. In fact, Ollendick (1979) discovered that children with two externally controlled parents were more anxious than other children who had at least one, or both, internal locus of control parents.

As previously noted, it was the self-esteem measure which accounted for the most significant differences between adult and child groups. This particular construct has been utilized perhaps more often than any other in studies of adult and childhood depression. In the actual diagnosis of depression, low-self-esteem

represents an important diagnostic element; documenting anxiety or significant external locus of control is not a diagnostic requirement even though these symptoms or traits are often aspects of the diagnostic picture. It could be argued that the self-esteem construct comes closest to capturing the essential features of the cognitive schemas described by Beck that have to do with self-appraisal. Beck believes that depressed individuals tend to see themselves as deficient, inadequate, or unworthy. Moreover, depressed persons often attribute unpleasant feelings to mental or moral defects within themselves. From this perspective, it is therefore not surprising to have found that the self-esteem measure had the most significant statistical properties.

Previously cited studies which investigated depressed mother-child interactions found that depression tended to severely compromise the mother's capacity for providing nurturance and affection. Many of these mothers were characterized as being rejecting, overly critical, and hostile toward their children. Crook et al (1981) concluded from their retrospective study of adult depression that early parent-child relationships played an important role in the depressive's view of himself as worthless and inferior. Jacobsen (cited in Formanek & Gurian, 1987) concluded that children raised in the

presence of parental depression suffered from what she termed "narcissistic vulnerability"; that is, children raised in such environments did not develop stable, positive images of themselves and often experienced feelings of shame and worthlessness which disrupted the maintenance of self-esteem. Half of the children in the depressed sample were living with only one parent. It is feasible to conclude that these children were more likely to feel the impact of their parent's illness than other children who had access to another parent in the home.

Similar environmental factors played some role in outcomes in the control sample of children. These children were probably less likely to experience as many negative interactions with their mothers. In other words, it could be argued that the parenting styles of non-depressed mothers were quantifiably different from those of depressed mothers. Research has suggested that mothers with high self-esteem tend to be more comfortable in their parenting roles than mothers reporting low self-esteem.

The decision to use a self-report methodology was a critical aspect of this study. Previous research had generally supported the self-rating method with adults, but it was not clear whether self-report instruments could be used with primary school-age children. In her

review of cognitive assessment techniques for children, Harris (1985) noted that "the greatest need is no longer the development of new instruments, but methodological investigations and empirical comparisons of existing instruments and procedures" (p. 377).

The data from this study offers some evidence which supports the use of self-report methodology with relatively young children. In addition to the statistically significant findings from the SEI, an analysis of dependent variable relationships within child groups also revealed negative correlational relationships between self-esteem and anxiety of a significant magnitude (e.g., control children SEI to trait-anxiety,  $r = .71$ ,  $p < .001$ ; case children,  $r = -.48$ ,  $p < .006$ ). These findings are consistent with earlier studies which found similar relationships when measuring these constructs in child populations. Weissman et al (1985), in their analysis of child data gathering methods, concluded that the child's report might be the most suitable method for detecting early signs and symptoms of disorder. This investigation appears to have added support for that conclusion.

### Recommendations

The recommendations for future research are influenced by the results of this study and certain issues raised in the review of literature.

1. No effort was made to account for sex differences in the analysis of data. Because previous research has found evidence that girls may react differently to maternal depression, future research efforts in this area need to evaluate data in terms of gender differences.

2. The design of this study did not allow for the evaluation of siblings of case sample children. In many instances, depressed mothers had other children also in the designated age range. It would have been interesting to evaluate these children as well to see how siblings compared on the dependent variables.

3. The assessment of fathers (or other significant caretakers) was omitted due to design constraints. It would have been useful to see how children matched with fathers on the dependent variables. Also, the impact of paternal depression is a phenomenon which warrants research attention.



4. In order to be truly developmental, child research must be longitudinal. The initial findings of this study could be enhanced significantly by the periodic reassessment of both case and control samples of children.

5. The severity and duration of depressive symptoms were not specifically acknowledged as categorical variables in the present study. Mothers in the depressed sample varied significantly in terms of length of illness and intensity of symptoms. Future research will need to explore these factors in terms of their impact on children.

6. This study did not attempt an objective assessment of the social and school adjustment of the child groups. Future research should attempt to document to what degree at-risk and normal children differ on these dimensions.

## APPENDICES

Appendix A: Table of  
Means and Standard Deviations

---

	Depressed		Non-depressed	
	M	sd	M	sd
SEI (adult)	40.1538	19.644	78.2000	15.531
SEI (child)	58.6154	17.119	70.9333	15.998
STAI	68.1538	14.175	47.9667	10.257
STAIC	51.3462	13.063	46.3333	10.320
ANSIE	14.1923	6.499	9.2667	3.493
CNSIE	16.1538	3.295	15.5333	4.455

Appendix B: Permission Forms

CONSENT TO PARTICIPATE IN RESEARCH

I am inviting you and your child to participate in a study of cognitive styles. In doing this research, I hope to learn more about the similarities in the thinking styles of mothers and their children. You were selected for this study because you are currently in treatment. If you choose to participate in this study, you will be given a number of brief, self-report questionnaires which are designed to measure your feelings and beliefs regarding yourself, other people, and life in general. These tests are easily completed and the entire battery can be done in about 30 minutes.

Any information that I learn about you that can be individually traced to you will be used responsibly and will be protected against release to unauthorized people. With your permission, your therapist may have access to these test results, and may choose to use the findings in further treatment planning. The results of this study will become part of a doctoral dissertation; however, publication of the results of this study will contain no information which might identify you.

Your decision whether or not to participate in this study will not in any way prejudice your treatment in this agency. Even if you decide to participate, you may withdraw at any time. You are making a decision whether or not you will participate in this study. If you sign this form, you have agreed that you will participate based upon reading and understanding this form.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Research Investigator

\_\_\_\_\_  
Date

CONSENT TO PARTICIPATE IN RESEARCH

I also would like for your child to participate in this study. Your child was selected because you are in treatment and he/she falls within the required age range of 7 to 9 years. If you allow your child to participate in this study, he/she will be given a number of brief, self-report questionnaires (the child versions of the same tests you will have taken) which are designed to measure certain attitudes and beliefs. These tests are specifically designed for children of your child's age. The child can complete the entire set of tests in less than 30 minutes.

Any information that I learn about your child that can be individually traced to him/her will be used responsibly and will be protected against release to unauthorized people. The results of this study will become part of a doctoral dissertation; however, publication of the results of this study will contain no information which might identify your child.

Your decision whether or not to allow your child to participate in this study will not in any way prejudice your treatment in this agency. Even if you decide to allow your child to participate, you may withdraw him/her at any time. Furthermore, I feel that it is essential that your child fully understand what will be expected of him or her and agree to participate. He or she must also understand that they may "call it quits" at anytime. Would you please help explain this. You are making a decision whether or not to allow your child's participation in this study. If you sign this form (your child's signature is also required), you have agreed that you will permit your child's participation based upon reading and understanding this form.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Signature (child)

\_\_\_\_\_  
Research Investigator

\_\_\_\_\_  
Date

CONSENT TO PARTICIPATE IN RESEARCH

I am inviting you and your child to participate in a study of maternal depression. As I indicated in my presentation during your PTA meeting, I am doing this research in the hope of learning more about how depression in a parent affects the developing beliefs and attitudes of the child. You were selected for this study because (1) you have no history of serious depression; (2) you are not currently suffering from depression; and, (3) you have a child in the required age range of 7 to 9 years. If you choose to participate in this study, you will be given a number of brief, self-report questionnaires which are designed to measure your feelings and beliefs regarding yourself, other people, and life in general. These tests are easily completed and the entire battery of tests can be completed in about 30 minutes.

Any information that I learn about you that can be individually traced to your will be used responsibly and will be protected against release to unauthorized people. The results of this study will become part of a doctoral dissertation; however, publication of the results of this study will contain no information which might identify you.

If you decide to participate in this study, you may withdraw at any time. You are making a decision whether or not you will participate in this study. If you sign this form, you have agreed that you will participate based upon reading and understanding this form.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Research Investigator

\_\_\_\_\_  
Date

CONSENT TO PARTICIPATE IN RESEARCH

I am requesting your permission to allow your child to participate in this study. If you permit your child to participate in this study, he/she will be given a number of brief, self-report questionnaires (the child versions of the tests you will have completed) which are designed to measure certain attitudes and beliefs. These tests are specifically designed for children in your child's age range. The child can complete the entire battery of tests in less than 30 minutes.

Any information that I learn about your child that can be individually traced to him/her will be used responsibly and will be protected against release to unauthorized people. The results of this study will become part of a doctoral dissertation; however, publication of the results of this study will contain no information which might identify you.

If you decide to allow your child to participate in this study, you may withdraw your permission at anytime. Furthermore, I feel that it is essential that your child fully understand what will be expected of him or her and agree to participate. He or she must also understand that they may "call it quits" at anytime. Would you please help explain this. You are making a decision whether or not you will allow your child to participate in this study. If you sign this form (child's signature also required), you have agreed that you will permit your child's participation based upon reading and understanding this form.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Signature (Child)

\_\_\_\_\_  
Research Investigator

\_\_\_\_\_  
Date

CONSENT TO SUBMIT NAME  
AS POSSIBLE PARTICIPANT IN RESEARCH

I agree to have my name submitted as a possible participant in James Correll's study of cognitive styles. The study will be fully explained to me before participation and I am not bound to participate following the explanation. Should I agree to participate I understand that I may withdraw from participation at anytime without penalty or prejudice.

\_\_\_\_\_  
Signature (Therapist)

\_\_\_\_\_  
Signature (Client)



Appendix C: Request for Volunteers Memorandum

MEMORANDUM

TO: Public and private mental health therapists  
FROM: Jim Correll, Dinwiddie Counseling Services  
SUBJECT: Request for research subjects

I am currently involved in a doctoral dissertation research project which is studying the potentially damaging effects of maternal depression on the developing emotional/cognitive structures of affected children. This study utilizes self-report measures to compare and contrast certain beliefs and attitudes held by both depressed and nondepressed mothers and their children. More specifically, instruments designed to measure self-esteem, locus of control, and anxiety will be administered to mothers and children in an effort to show that depressed mothers and their children will (1) have lower self-esteem; (2) be more externally controlled; and, (3) express more feelings of anxiety when compared with controls. If significant differences are found between case and control groups in terms of these variables, then potentially useful information regarding prevention and treatment of at-risk children might result.

Potential candidates for this research project must meet the following preliminary criteria in order to be considered:

1. Potential candidates must carry a diagnosis of major depression or dysthymia using DSM-III-R criteria.
2. Candidates must have children between the ages of 7 and 9 years.
3. Prospective mothers cannot have prior or co-existing diagnoses of psychotic disorders (e.g. schizophrenia, bi-polar disorder) or cannot carry a borderline personality diagnosis.
4. Mothers who have exceptional children cannot be included (i.e. children with diagnoses such as mental retardation, autism, severe learning disabilities).

If you have any current clients who meet these preliminary criteria, I would ask that you discuss this research project with them. These questionnaires can be completed in less than 30 minutes--there is no other obligation other than to complete the forms. Clients willing to participate should sign the provided preliminary consent form. I would then ask that you contact me with the names and phone numbers of these clients. The resulting data can be shared with you with the client's permission.

## Appendix D: DSM-III-R Criteria

### Diagnostic Criteria for Major Depressive Episode

Note: A "Major Depressive Syndrome" is defined as criterion A below:

A. At least five of the following symptoms have been present during the same two-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood, or (2) loss of interest or pleasure. (Do not include symptoms that are clearly due to a physical condition, mood-incongruent delusions or hallucinations, incoherence, or marked loosening of associations.)

(1) depressed mood (or can be irritable mood in children and adolescents) most of the day, nearly every day, as indicated either by subjective account or observation by others.

(2) markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated either by subjective account or observation by others of apathy most of the time)

(3) significant weight loss or weight gain when not dieting (e.g., more than 5% of body weight in a month), or decrease or increase in appetite nearly every day (in children, consider failure to make expected weight gains)

(4) insomnia or hypersomnia nearly every day

(5) psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)

(6) fatigue or loss of energy nearly every day

(7) feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)

(8) diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)

(9) recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide

B. (1) It cannot be established that an organic factor initiated and maintained the disturbance

(2) The disturbance is not a normal reaction to the death of a loved one (Uncomplicated Bereavement)

Note: Morbid preoccupation with worthlessness, suicidal ideation, marked functional impairment or psychomotor retardation, or prolonged duration suggest bereavement complicated by Major Depression.

C. At no time during the disturbance have there been delusions or hallucinations for as long as two weeks in the absence of prominent mood symptoms (i.e., before the mood symptoms developed or after they have remitted.

D. not superimposed on Schizophrenia, Schizophreniform Disorder, Delusional Disorder, or Psychotic Disorder NOS.

Major Depressive Episode codes: fifth-digit code numbers and criteria for severity of current state of Bipolar Disorder, Depressed, or Major Depression:

1 - Mild: Few, if any, symptoms in excess of those required to make the diagnosis, and symptoms result in only minor impairment in occupational functioning or in usual social activities or relationships with others.

2 - Moderate: Symptoms or functional impairment between "mild" and "Severe."

3 - Severe, without Psychotic Features: Several symptoms in excess of those required to make the diagnosis, and symptoms markedly interfere with occupational functioning or with usual social activities or relationships with others.

4 - With Psychotic Features: Delusions or hallucinations. If possible, specify whether the psychotic features are mood-congruent or mood-incongruent.

Mood-congruent psychotic features: Delusions or hallucinations whose content is entirely consistent with the typical depressive themes of personal inadequacy, guilt, disease, death, nihilism, or deserved punishment, included here are such symptoms as persecutory delusions (not directly related to depressive themes), thought insertion, thought broadcasting, and delusions of control.

5 - In Partial Remission: Intermediate between "In Full Remission" and "Mild," and no previous Dysthymia. (If Major Depressive Episode was superimposed on Dysthymia, the diagnosis of Dysthymia alone is given once the full criteria for a Major Depressive Episode are no longer met.)

6 - In Full remission: During the past six months no significant signs or symptoms of the disturbance.

0 - Unspecified.

#### Diagnostic Criteria for Dysthymia

A. Depressed mood (or can be irritable mood in children and adolescents) for most of the day, more days than not, as indicated either by subjective account or observation by others, for at least two years (one year for children and adolescents)

B. Presence, while depressed, of at least two of the following:

(1) poor appetite or overeating

(2) insomnia or hypersomnia

(3) low energy or fatigue

(4) low self-esteem

(5) poor concentration or difficulty making decisions

(6) feelings of hopelessness

C. During a two-year period (one-year for children and adolescents) of the disturbance, never without the symptoms in A for more than two months at a time.

D. No evidence of an unequivocal Major Depressive Episode during the first two years (one year for children and adolescents) of the disturbance.

Note: There may have been a previous Major Depressive Episode, provided there was a full remission (no significant signs or symptoms for six months) before development of the Dysthymia. In addition, after these two years (one year in children or adolescents) of Dysthymia, there may be superimposed episodes of Major Depression, in which case both diagnoses are given.

E. Has never had a Manic Episode or an unequivocal Hypomanic Episode.

F. Not superimposed on a chronic psychotic disorder, such as Schizophrenia or Delusional Disorder.

G. It cannot be established that an organic factor initiated and maintained the disturbance, e.g., prolonged administration of an antihypertensive medication.

Specify primary or secondary type:

Primary type: the mood disturbance is not related to a preexisting, chronic, non-mood, Axis I or Axis III disorder, e.g., Anorexia Nervosa, Somatization Disorder, a Psychoactive Substance Dependence Disorder, an Anxiety Disorder, or rheumatoid arthritis.

Secondary type: the mood disturbance is apparently related to a preexisting, chronic, non-mood Axis I or Axis III disorder.

Specify early onset or late onset:

Early onset: onset of the disturbance before age 21.

Late onset: onset of the disturbance at age 21 or later.

## REFERENCES

## REFERENCES

- Abramson, L.Y., Seligman, M.E.P., & Teasdale, J.D. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.
- Ahmed, S., Valliant, P.M., & Swindle, D. (1985). Coopersmith Self-Esteem Inventory: Perceptual and Motor Skills, 61, 1235-1241.
- Allie, S.M. (1979). The normative and structural properties of the Children's Nowicki-Strickland Scale of Internal-External Control: Children with adjustment problems. Psychology in the Schools, 16, 32-37.
- American Psychiatric Association (1980). Diagnostic and statistical manual of mental disorders (3rd ed). Washington, DC: APA.
- American Psychiatric Association (1987). Diagnostic and statistical manual of mental disorders (3rd ed. - revised). Washington, DC: APA.
- Anthony, E.J., & Ittleson, B.F. (1980). The effects of maternal depression on the infant Paper presented at the Symposium on Infant Psychiatry III, San Francisco.
- Arnkoff, D. (1980). Psychotherapy from the perspective of cognitive theory. In M. Mahoney (Ed.) Psychotherapy process. New York: Plenum Press
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavior change. Psychological Review, 84, 191 - 215.
- Beardslee, W.R. (1986). The need for the study of adaptation in the children of parents with affective disorder. In M. Rutter, C. Izard, & P.B. Read (Eds.). Depression in young people. New York: Guilford Press.
- Beardslee, W.R., Bemporad, J., Keller, M.B., & Klerman, G.L. (1983). Children of parents with major affective disorder: A review. American Journal of Psychiatry, 140, 825-831.

- Beck, A.T. (1967). Depression: Clinical, experimental, and theoretical aspects. New York: Hoeber.
- Beck, A.T. (1976). Cognitive therapy and the emotional disorders. New York: Meridian.
- Beck, A.T., & Beamesderfer, A. (1974). Assessment of depression: The depression inventory. In P. Pichot (Ed.). Psychological measurement in psychopharmacology: Modern problems in pharmacopsychiatry. (Vol. 7). Basel, Switz: Karger.
- Beck, A.T., & Emery, G. (1985). Anxiety disorders and phobias. New York: Basic Books.
- Beck, A.T., Rush, A.J., Shaw, B.F., & Emery, G. (1979). Cognitive therapy of depression. New York: Guilford Press.
- Bemporad, J. (1978). Depression and methods of child rearing: In S. Arieti, & J. Bemporad (Eds.). Severe and mild depression. New York: Basic Books.
- Billings, A.G., & Moos, R.H. (1983). Comparisons of children of depressed and nondepressed parents: A social-environmental perspective. Journal of Abnormal Child Psychology, 11, 463-486.
- Bloom, P.M., & Brady, J.P. (1968). An ipsative validation of the Multiple Affect Adjective Checklist. Journal of Clinical Psychology, 24, 45-46.
- Brumback, R.A., Jackoway, M.K., & Weinberg, W.A. (1980). Relation of intelligence to childhood depression in children referred to an educational diagnostic center. Perceptual and Motor Skills, 50, 11-17.
- Bumberry, W., Oliver, J.M., & McClure, J.N. (1978). Validation of the Beck Depression Inventory in a university population using psychiatric estimate as the criterion. Journal of Consulting and Clinical Psychology, 46, 150-155.
- Burger, J.M. (1984). Desire for control, locus of control, and proneness to depression. Journal of Personality, 52, 71-87.



- Burkhart, B.R., Gynther, M.D., & Fromuth, M.E. (1980). The relative predictive validity of subtle versus obvious items on the MMPI depression scale. Journal of Clinical Psychology, 36, 748-751.
- Campbell, S.B. (1984). Research issues in clinical child psychology. In A.S. Bellack & M. Hersen (Eds.). Research methods in clinical psychology. New York: Pergamon Press.
- Cantwell, D.P., & Carlson, G. (1979). Problems and prospects in the study of childhood depression. Journal of Nervous and Mental Disease, 167, 522-529.
- Chandler, T.A. (1976). A note on the relationship of internality-externality, self-acceptance and self-ideal discrepancies. Journal of Psychology, 94, 145-146.
- Chandler, T.A., & Dugovics, D.A. (1977). Sex differences in research on locus of control. Psychological Reports, 41, 47-53.
- Chess, S. & Thomas, A. (1972). Differences in outcome with early intervention in children with behavior disorders. In M. Roff, L.N. Robins, & M. Pollock (Eds.), Life history research in psychopathology. Minneapolis: University of Minnesota Press
- Cicchetti, D. (1984). The emergence of developmental psychopathology. Child Development, 55, 1-7.
- Cicchetti, D., & Schneider, Rosen, K. (1984). Theoretical and empirical considerations in the investigation of the relationship between affect and cognition. In C. Izard, J. Kagan, & Zajone (Eds.). Emotions, recognition, and behavior. New York: Cambridge University Press.
- Cicchetti, D., & Schneider-Rosen, K. (1986). An organizational approach to childhood depression. In M. Rutter, C.E. Izard, & P.B. Read (Eds.). Depression in young people: Developmental and clinical perspectives. New York: Guilford Press.
- Cohler, B.J., Grunebaum, H.V., Weiss, J.L., Hartman, C.R., & Gallant, D.H. (1976). Child care attitudes and adaptation to the maternal role among mentally ill and well mothers. American Journal of Orthopsychiatry, 46, 123-133.

- Coopersmith, S. (1981). Manual for Self-Esteem Inventories. Palo Alto, CA: Consulting Psychologists Press.
- Costello, E.J. (1982). Locus of control and depression in students and psychiatric outpatients. Journal of Clinical Psychology, 38, 340-343.
- Cowan, R., Altmann, H., & Pysh, F. (1978). A validity study of selected self-concept instruments. Measurement and Evaluation in Guidance, 10, 211-221.
- Coyne, J.C. (1982). A critique of cognitions as causal entities with particular reference to depression. Cognitive Therapy and Research, 6, 3-13.
- Crook, T., Raskin, A., & Eliot, J. (1981). Parent-child relationships and adult depression. Child Development, 52, 950-957.
- Davis, H. (1979). The self-schema and subjective organization of personal information in depression. Cognitive Therapy and Research, 3, 415-425.
- Davis, H., & Unruh, W.R. (1981). The development of the self-schema in adult depression. Journal of Abnormal Psychology, 90, 125-133.
- Dobson, K.S., & Shaw, B.F. (1986). Cognitive assessment with major depressive disorders. Cognitive Therapy and Research, 10, 13-29.
- Dunn, R.J. (1979). Cognitive modification with depression-prone psychiatric patients. Cognitive Therapy and Research, 3, 307-317.
- Eisenbruch, M. (1983). Affective disorders in parents: Impact on children. In D.P. Cantwell & G.A. Carlson (Eds.), Affective disorders in childhood and adolescence. New York: Spectrum Publications.
- Ellis, A. (1962). Reason and emotion in psychotherapy. New York: Stuart.
- Ellis, A. & Harper, R.A. (1961). A guide to rational living. Hollywood: Wilshire Books.

- Emery, G., Bedrosian, R., & Garber, J. (1983). Cognitive therapy with depressed children and adolescents. In D.P. Cantwell and G.A. Carlson (Eds.), Affective disorders in childhood and adolescence. New York: Spectrum Publications.
- Fielstein, E., Klein, M.S., Fischer, M., Hanan, C., Koburger, P., Schneider, M.J., & Leitenberg, H. (1985). Self-esteem and causal attributions for success and failure in children. Cognitive Therapy and Research, 8, 381-398.
- Finch, A.J., Spirito, A., Kendall, P.C., & Mikulka, P.J. (1981). Multidimensionality of the Nowicki-Strickland Locus of Control Scale for Adults. Journal of Personality Assessment, 45, 151-154.
- Finch, S.M. (1960). Fundamentals of child psychiatry. New York: Norton & Company.
- Formanek, R., & Gurian, A. (Eds.). (1987). Women and depression: A lifespan perspective. New York: Springer.
- Gallagher, D., Nies, G., & Thompson, L.W. (1982). Reliability of the Beck Depression Inventory with older adults. Journal of Consulting and Clinical Psychology, 50, 152-153.
- Gittelman-Klein, R. (1977). Definitional and methodological issues concerning depressive illness in children. In J. Schulterbrandt & A. Raskin (Eds.). Depression in childhood: Diagnosis, treatment, and conceptual models. New York: Raven Press.
- Glaser, K. (1967). Masked depression in children and adolescents. American Journal of Psychotherapy, 21, 565-574.
- Goldfried, M., & Sobocinski, D. (1975). Effects of irrational beliefs on emotional arousal. Journal of Consulting and Clinical Psychology, 43, 504-510.
- Gualtieri, C.T. (1977). Imipramine and children: A review and some speculations about the mechanism of drug action. Diseases of the Nervous System, 33, 368-375.

- Guidano, V.F., & Liotti, G. (1983). Cognitive processes and emotional disorders. New York: Guilford Press.
- Hammen, C. & Krantz, S.E. (1976). Effects of success and failure on depressive cognitions. Journal of Abnormal Psychology, 85, 577-586.
- Hammen, C., & Krantz, S.E. (1985). Measures of psychological processes in depression. In E.E. Beckham & W.R. Leber (Eds.), Handbook of depression: Treatment, assessment, and research. Homewood, IL: Dorsey Press.
- Hammen, C., & Zupan, B. (1984). Self-schemas, depression, and the processing of personal information in children. Journal of Experimental Child Psychology, 37, 598-608.
- Harder, D.W., Kokes, R.F., Fisher, L., & Strauss, J. (1980). Child competence and psychiatric risk IV. Relationships of parent diagnostic classifications and parent psychopathology severity to child functioning. Journal of Nervous and Mental Diseases, 168, 343-347.
- Hetherington, E.M., & Martin, B. (1972). Family interactions and psychopathology in children. In H.C. Quay and J.S. Werry (Eds.), Psychopathological disorders of children. New York: Wiley.
- Himle, D., Thyer, B., & Papsdorf, J. (1980). Relationships between rational beliefs and anxiety. Paper presented at the third national conference on Rational Emotive Therapy, New York.
- Hodges, K.K., & Siegel, L.J. (1985). Depression in children and adolescents. In E.E. Beckham & W.R. Leber (Eds.), Handbook of depression: Treatment, assessment, and research. Homewood, IL: Dorsey Press.
- Izard, C.E. (1972). Patterns of emotions. New York: Academic Press.
- Jacobson, S., Fasman, J., & Di Mascio, A. (1975). Deprivation in the childhood of depressed women. Journal of Nervous and Mental Diseases, 166, 5-14.

- Jones, C. (1976). Conceptual strategies in concept attainment as a function of locus of control. Master's thesis, Georgia State University.
- Kanfer, R., & Zeiss, A.M. (1983). Depression, interpersonal standard setting, and judgments of self-efficacy. Journal of Abnormal Psychology, 92, 319-329.
- Kaslow, N.J., Rehm, L.P., & Siegel, A.W. (1984). Social-cognitive and cognitive correlates of depression in children. Journal of Abnormal Child Psychology, 12, 605-620.
- Kawash, G.F. (1982). A structural analysis of self-esteem from pre-adolescence through young adulthood: Anxiety and extraversion as agents in the development of self-esteem. Journal of Clinical Psychology, 38, 301-311.
- Kearney, M.J., & Kearney, J.F. (1983). Investigation of sex differences and consistency of factor pattern on the Adult Nowicki-Strickland Internal-External Control Scale. Journal of Clinical Psychology, 39, 416-421.
- Kendall, P.C., Finch, A.J., Little, V.L., Chirico, B.M., & Ollendick, T.H. (1978). Variations in a construct: Quantitative and qualitative differences in children's locus of control. Journal of Consulting and Clinical Psychology, 46, 590-592.
- Kimball, O.M. (1972). Development of norms for the Coopersmith Self-Esteem Inventory: Grades four through eight. Doctoral dissertation, Northern Illinois University, 1972. Dissertation Abstracts International, 34, 1131-1132.
- Kokenes, B.A. (1978). A factor analytic study of the Coopersmith Self-Esteem Inventory. Adolescence, 13, 149-155.
- Kovacs, M., & Beck, A.T. (1977). An empirical-clinical approach toward a definition of childhood depression in J.G. Schulterbrandt & A. Roskin (Eds.), Depression in childhood: Diagnosis, treatment, and conceptual models, New York: Raven Press.

- Kovacs, M., & Beck, A.T. (1978). Maladaptive cognitive structures in depression. American Journal of Psychiatry, 135, 525-532.
- Krantz, S., & Hammen, C. (1979). Assessment of cognitive bias in depression. Journal of Abnormal Psychology, 88, 611-619.
- Kuiper, N.A., & Rogers, T.B. (1979). The encoding of personal information: Self-other differences. Journal of Personality and Social Psychology, 37, 499-514.
- Kupfer, D.J., Coble, P., Kane, J. (1979). Imipramine and EEG sleep in children with depressive symptoms. Psychopharmacology, 60, 117-123.
- LaPointe, K.A., & Crandell, C.J. (1980). Relationship of irrational beliefs to self-reported depression. Cognitive Therapy and Research, 4, 247-250.
- Lapouse, R. (1966). The epidemiology of behavior disorders in children. American Journal of Diseases of Children, 111, 594-599.
- Lefcourt, H.M. (1976). Locus of control: Current trends in theory and research. Hillsdale, NJ: Erlbaum.
- Lefkowitz, M.M., & Burton, N. (1978). Childhood depression: A critique of the concept. Psychological Bulletin, 85, 716-726.
- Lefkowitz, M.M., & Tesiny, E.P. (1980). Assessment of childhood depression. Journal of Consulting and Clinical Psychology, 48, 43-50.
- Leggett, J., & Archer, R.P. (1979). Locus of control and depression among psychiatric inpatients. Psychological Reports, 45, 835-838.
- Leon, G.R., Kendall, P.E., & Garber, J. (1980). Depression in children. Journal of Abnormal Child Psychology, 8, 221-235.
- Lewisohn, P.M., Larson, D.W., & Munoz, R.F. (1982). The measurement of expectancies and other cognitions in depressed individuals. Cognitive Therapy and Research, 6, 437-446.

- Lewisohn, P.M., Steinmetz, J.L., Larson, D.W., & Franklin, J. (1981). Depression-related cognitions: Antecedents or consequences? Journal of Abnormal Psychology, 90, 213-219.
- Ling, W., Oftedal, G., & Winberg, W. (1970). Depressive illness in children presenting as severe headache. American Journal of the Disabled Child, 120, 122-124.
- McConville, B.J., & Boag, L.C. (1976). Therapeutic approaches in childhood depression. Presented at the Annual Meeting of the American Academy of Child Psychiatry, Toronto.
- McConville, B.J., Boag, L.C., & Purohit, A.P. (1973). Three types of childhood depression. Canadian Journal of Psychiatry, 18, 133-178.
- McLean, P.D., Parental depression. Incompatible with effective parenting. Paper presented at the Sixth Annual Conference on Behavioral Modification, Banff, Alberta, April 1974.
- Malmquist, C.P. (1975). Depression in childhood. In F. Flach & S. Draghi (Eds.). The nature and treatment of depression. New York: Wiley.
- Metcalfe, M., & Goldman, E. (1965). Validation of an inventory for measuring depression. British Journal of Psychiatry, 111, 240-242.
- Mink, O. (1976). Impact of instruction and counseling on high risk youth. National Institute of Mental Health Project, University of Texas at Austin.
- Mullins, L.L., Siegel, L.J., & Hodges, K. (1984). Cognitive problem solving and life event correlates of depressive symptoms in children. Journal of Abnormal Child Psychology, 13, 305-314.
- Murray, P.A. (1970). The clinical picture of depression in school children. Journal of the Irish Medical Association, 63, 53-56.
- Nelson, R.E. (1977). Irrational beliefs in depression. Journal of Consulting and Clinical Psychology, 45, 1190-1191.

- Nemec, A.M. (1974). The effect of attitude similarity and locus of control on simulated jury decisions. Doctoral dissertation, Emory University.
- Nielson, A., Secunda, S., Friedman, R., & Williams, T. (1972). Prevalence and recognition of depression among ambulatory patients in a group medical practice. Proceeding at meeting of American Psychiatric Association, Dallas.
- Norman, W.H., Miller, I.W., & Klee, S.H. (1983). Assessment of cognitive distortion in a clinically depressed population. Cognitive Therapy and Research, 7, 133-140.
- Norvell, N., Brophy, C., & Finch, A.J. (1985). The relationship of anxiety to childhood depression. Journal of Personality Assessment, 49, 150-153.
- Nowicki, S. (1988). Manual for the Children's Nowicki-Strickland Internal-External Locus of Control Scale. Emory University.
- Nowicki, S. (1988). Manual for the Adult Nowicki-Strickland Internal-External Locus of Control Scale. Emory University.
- Nowicki, S., & Strickland, B.R. (1973). A locus of control scale for children. Journal of Consulting and Clinical Psychology, 40, 148-154.
- Ollendick, D.G. (1979). Parental locus of control and the assessment of children's personality characteristics. Journal of Personality Assessment, 43, 401-405.
- Orvaschel, H. (1983). Maternal depression and child dysfunction. In B.B. Lahey & A.E. Kazdin (Eds.), Advances in clinical child psychology. Vol. 6, New York: Plenum Press.
- Panaccione, V.F., & Wahler, R.G. (1986). Child behavior, maternal depression, and social coercion as factors in the quality of child care. Journal of Abnormal Child Psychology, 14, 263-278.
- Petti, T.A. (1978). Depression in hospitalized child psychiatry patients: Approaches to measuring depression. Journal of the American Academy of Child Psychiatry, 17, 49-59.



- Puig-Antich, J., Blau, S., & Nola, N. (1977). Prepubertal major depressive disorder: A pilot study presented at the American Academy of Child Psychiatry Meeting, Houston, Texas.
- Raskin, A., Boothe, H., Reatig, N., & Schulterbrandt, J. (1971). Factor analyses of normal and depressed patients' memories of parental behavior. Psychological Reports, 29, 871-879.
- Rehm, L.P. (1977). A self-control model of depression. Behavior Therapy, 8, 787-804.
- Remainis, G. (1974). Alienation and education. A paper presented at the Eighth World Congress of Sociology, Toronto.
- Reynolds, W.M., Anderson, G., & Bartell, N. (1985). Measuring depression in children: A multimethod assessment investigation. Journal of Abnormal Child Psychology, 13, 513-526.
- Reynolds, W.M., & Gould, J.W. (1981). A psychometric investigation of the standard and short form Beck Depression Inventory. Journal of Consulting and Clinical Psychology, 49, 306-307.
- Rideau, A. (1971). Depressive states in profound mental retardation. In A.L. Ansell (Ed.) Depressive states in childhood and adolescence. Stockholm: Almqvist & Wiksell.
- Rie, H.E. (1966). Depression in childhood: A survey of some pertinent contributions. Journal of the Academy of Child Psychiatry, 5, 653-685.
- Robins, L.N. (1966). Deviant children grown up. Baltimore: Williams & Wilkins.
- Rogers, T.R., & Forehand, R. (1983). The role of parent depression in interactions between mothers and their clinic-referred children. Cognitive Therapy and Research, 7, 315-324.
- Rutter, M. (1986). The developmental psychopathology of depression: Issues and perspectives. In M. Rutter, C. Izard, & P. Read (Eds.). Depression in young people. New York: Guilford Press.

- Rutter, M., Izard, C.E., & Read, P.B. (Eds.) (1986). Depression in young people: Development and clinical perspectives. New York: Guilford Press.
- Saylor, C.F., Finch, A.J., Baskin, C.H., Furey, W., & Kelly, M.M. (1984). Construct validity for measures of childhood depression: Application of multitrait-multimethod methodology. Journal of Consulting and Clinical Psychology, 52, 977-985.
- Saylor, C.F., Finch, A.J., Spirito, A., & Bennett, B. (1984). The Children's Depression Inventory: A systematic evaluation of psychometric properties. Journal of Consulting and Clinical Psychology, 52, 955-967.
- Schulterbrandt, J.G., & Raskin, A. (Eds.) (1977). Depression in childhood: Diagnosis, treatment, and conceptual models. New York: Raven Press.
- Seligman, E.P., & Peterson, (1986). A learned helplessness perspective on childhood depression: Theory and research. In M. Rutter, C. Izard, & P.B. Read (Eds.). Depression in young people. New York: Guilford Press.
- Seligman, M.E.P. (1975). Helplessness: On depression, development, and death. San Francisco: Freeman.
- Selman, R.L., Jacquette, D., & Lavin, D.R. (1977). Interpersonal awareness in children: Toward an integration of developmental and clinical child psychology. American Journal of Orthopsychiatry, 47(2), 264-274.
- Shavelson, R.J., Hubner, J.J., & Stanton, G.C. (1976). Self-concept: Validation of construct interpretations. Review of Educational Research, 46, 467-441.
- Shaw, B.F., Vallis, T.M., & McCabe, S.B. (1985). The assessment of the severity and symptom patterns in depression. In E. Beckham & W. Leber (Eds.). Handbook of depression: Treatment, assessment, and research. Homewood, IL: Dorsey Press.
- Spatz, K., & Johnston, E. (1973). Internal consistency of the Coopersmith Self-Esteem Inventory. Educational and Psychological Measurements, 33, 875-876.

- Spielberger, C.D., Edwards, C.D., Lushene, R.E., Montuori, J., & Platzek, D. (1973). State-Trait Inventory for Children Preliminary Manual. Palo Alto, CA: Consulting Psychologists Press.
- SPSS Inc. (1983). SPSSx user's guide. New York: McGraw Hill.
- Strickland, B.R. (1978). Internal-external expectancies and health-related behaviors. Journal of Consulting and Clinical Psychology, 46, 1192-1211.
- Strober, M., Green, J., & Carlson, G. (1981). Utility of the Beck Depression Inventory with psychiatrically hospitalized adolescents. Journal of Consulting and Clinical Psychology, 49, 482-483.
- Teasdale, J.D., & Fennell, M.J. (1982). Immediate effects on depression of cognitive therapy interventions. Cognitive Therapy and Research, 6, 343-352.
- Tesiny, E.P., Lefkowitz, M.M., & Gordon, N.H. (1980). Childhood depression, locus of control and school achievement. Journal of Educational Psychology, 72, 506-510.
- Thyer, B.A., Papsdorf, J.D. (1981). Concurrent validity of the rational behavior inventory. Psychological Reports, 48, 255-258.
- Tonge, W.L. (1976). Problem family children grown up. Paper presented to the 10th International Congress of Psychotherapy. Paris, July 1976.
- Toolan, J.M. (1962). Depression in children and adolescents. American Journal of Orthopsychiatry, 32, 404-414.
- Weinberg, W.A., Rutman, J., & Sullivan, L. (1973). Depression in children referred to an educational diagnostic center: Diagnosis and treatment. Journal of Pediatrics, 83, 1065-1072.
- Weintraub, S., Winters, K.C., & Neale, J.M. (1986). Competence and vulnerability in children with an affectively disordered parent. In M. Rutter, C. Izard, & P.B. Read (Eds.). Depression in young people. New York: Guilford Press.

- Weissman, M.M. (1979). Depressed parents and their children: Implications for prevention. In J.D. Noshpitz (Ed.), Basic handbook of child psychiatry. Vol. 4, New York: Basic Books.
- Weissman, M.M., John K., Merikangas, K.R., Prusoff, B.A., Wickramaratne, P., Gammon, G.D., Angold, A., & Warner, V. (1986). Depressed parents and their children: General health, social and psychiatric problems. Unpublished article from Department of Psychiatry, Yale University School of Medicine, New Haven, Connecticut.
- Weissman, M.M., Merikangas, K., Prusoff, B., John, K., & Wickramaratne, P. (1985). Children at high and at low risk for depression. Presented at the 138th Annual Meeting of the American Psychiatric Association. Dallas, Texas.
- Weissman, M.M., Paykel, E.S., & Klerman, G.L. (1972). The depressed woman as a mother. Social Psychiatry, 7, 98-108.
- Wenar, C. (1982). Developmental psychology: Its nature and models. Journal of Clinical Child Psychology, 11, 192-201.
- Werry, J.S., & Quay, H.C. (1971). The prevalence behavior symptoms in younger elementary school children. American Journal of Orthopsychiatry, 41, 136-143.
- Wilkinson, I.M., & Blackburn, I.M. (1981). Cognitive style in depressed and recovered patients. British Clinical Psychology, 20, 283-292.
- Williams, J.M.G. (1984). The psychological treatment of depression. New York: Free Press.
- Wing, J., Birley, J., Cooper, J., Graham, P., & Isaacs, A. (1967). Reliability of a procedure for measuring and classifying "Present Psychiatric State." British Journal of Psychiatry, 113, 499-515.

VITA

James Allen Correll

Birthdate: January 10, 1945

Birthplace: Jefferson, North Carolina

Education:

The College of William and Mary in Virginia  
Williamsburg, Virginia  
Doctor of Education  
in Counseling/School Psychology  
May 1989

The College of William and Mary in Virginia  
Williamsburg, Virginia  
Master of Education in School Psychology  
May 1978

University of Virginia  
Charlottesville, Virginia  
Bachelor of Arts in English  
June 1971

Experience:

Clinic Director  
Dinwiddie Counseling Services  
Dinwiddie, Virginia  
1985-1989

School Psychologist  
Prince George County Public Schools  
Prince George, Virginia  
1978-1985

Abstract

MEASURING CERTAIN COGNITIVE TRAITS IN  
DEPRESSED MOTHERS AND THEIR CHILDREN:  
A CONTROLLED STUDY

James Allen Correll, Ed.D.

College of William and Mary, May, 1989

Chairman: Roger R. Ries, Ph.D.

This study used self-report measures of self-esteem, locus of control, and anxiety to contrast the thinking styles of depressed mothers and their children. The resulting profiles were then compared with those of a control group of non-depressed mothers and children in an effort to document differences on the dependent variable measures.

Mothers were admitted to the depressed group if they were currently in treatment for either major depression or dysthymia. Significant depressive symptoms also had to be documented in a self-report depression inventory. Mothers for the control group could have no history of depression or other significant psychiatric disorder.

Children in each group were admitted if they fell within the designated age range of 7 - 9 years. Exceptional children were excluded (i.e., children with documented mental retardation, learning disabilities, or serious emotional disturbance).

The final control group contained 30 mothers and children. The final case group contained 26 mothers and children. All adult participants completed the State-Trait Anxiety Inventory, the Self-Esteem Inventory, and the Nowicki-Strickland Internal-External Scale. The children in both groups completed the child versions of these same instruments.

The data analysis supported a number of the research hypotheses. Depressed mothers were significantly different from control mothers on all dependent variable measures. Control and case children differed significantly on self-esteem, but not on measures of locus of control or trait-anxiety. The self-esteem and trait-anxiety scores of control mothers and children were significantly correlated. There was a significant

correlational relationship only on the self-esteem measure when depressed mother and child scores were compared.

It was concluded that self-esteem appeared to be the most significant dependent variable in discriminating between groups. The locus of control measure appeared to have the least statistical significance when within or between group comparisons were made.

Several possible reasons for group differences were discussed. It was concluded that the self-report method was a legitimate technique for measuring certain cognitive traits in young children.