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Emotional Dysregulation In Children With Aids-Diagnosed Mothers: A Comparative Study

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EMOTIONAL DYSREGULATION IN CHILDREN
WITH AIDS-DIAGNOSED MOTHERS: A COMPARATIVE STUDY

BY

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Chapter I

INTRODUCTION

This chapter serves as an introduction to this study which investigated the effects of living with an AIDS-diagnosed mother on the psychological functioning of children in such families. It presents background, a statement of the problem and prominent research questions. Following a section outlining both conceptual and operational definitions of terms, the chapter sets forth hypotheses and discusses the significance of the study. The concluding section identifies limitations of the investigation.

Introduction to the Problem

Erik Erikson's psychosocial approach to children's emotional growth holds that each child is a "life cycle in a community of life cycles" (1959, p. 121). Hence a child's identity, whether positively or negatively adaptive, is shaped by his or her experience of unique environmental and social relationships. AIDS presents as a significantly molar life event for a growing number of children who live with an AIDS-infected parent because this particular syndrome compels these youngsters to adapt to a multiplicity of atypical environmental and interpersonal relationship changes: Children face adjusting not only to parental disability and possible death of a parent, but also to the social stigma associated with the disease. It has been well documented that offspring of medically or psychologically compromised parents present with more psychopathology than is typical

for children in general (Arthur & Kemme, 1964; Ekdahl, Rice, & Schmidt, 1962; Furman, 1986; Miller, 1971; Wellisch, 1979).

While there is a vast literature on psychological functioning in persons-with-AIDS, a considerable amount of the material on family reactions has involved studies of parents or lovers of gay patients (Baumgartner, 1986; Kubler-Ross, 1987; Morin & Batchelor, 1984). Oftentimes "significant" others face a dual challenge: They must deal not only with a diagnosis of terminal illness in a family member, but they may also be forced into re-confronting the patient's "life style" (i.e., homosexuality/bisexuality or intravenous drug use), life styles severely censured by much of society. The seriousness of AIDS, and its association with socially disapproved "life style" behaviors, coupled by irrational fears of contagion severely stress families' coping abilities (Furstenberg & Olson, 1984).

Although any catastrophic illness in a family member threatens the system's existing ways of meeting its emotional and financial needs AIDS, as a newly-emerged contemporary catastrophic illness, carries a strong stigma which causes families to face some unique prejudices. Social supports typically available to families in crises are generally absent due to the disease's association with deviance and transmissibility. In this respect AIDS takes on the negative qualities of a "family secret" (Avery, 1983).

Background to Acquired Immune Deficiency Syndrome

Since it was first described in 1981, Acquired Immune Deficiency Syndrome (AIDS) has become a major public health problem of epidemic proportions. The clinical characteristics of AIDS are by now well known: there is a reduction in cellular immunity

that leaves an individual susceptible to pneumocystis carinii, overwhelming opportunistic infections, and Kaposi's sarcoma. There is at present no cure for the underlying immune deficiency disease. By December 31, 1997 a total of 633, 000 adult/adolescent cases had been reported to the Center for Disease Control (CDC) and 385, 968 of these persons-with- AIDS have died (CDC, 1997). In the United States, AIDS occurs primarily within discrete at-risk subgroups (gay and bisexual men, intravenous drug users, hemophiliacs); however, AIDS also appears in other groups such as the sexual partners of at-risk subgroups and in children who are born to women who carry the acquired immune deficiency syndrome virus (HIV-I).

As of December 1997, the Centers for Disease Control (CDC, 1997) noted that of the estimated one million HIV-infected Americans more than 98, 468 are women. Of that group 43, 214 women diagnosed with AIDS were exposed through intravenous drug use; 38, 391 were infected by heterosexual contact; 3, 509 through blood transfusions and, finally, 13, 509 of the infected women acquired the virus from undetermined causes. Most women with AIDS were African American or Hispanic (72%), residents of metropolitan centers (73%) and of reproductive age. AIDS remains one of the leading causes of death for minority women in New Jersey between the ages of 25-44.

Clearly the most devastating impact of AIDS is on individuals who contract the syndrome. The majority are young, previously healthy people. When they are diagnosed with what is considered to be a potentially fatal disease, they undergo a series of intrapsychic and social reactions: loss of self-esteem; feelings of alienation and isolation from peer groups and mainstream society; rapid changes in body image; and, loss of control over their lives (Forstein, 1984). The fact that many people diagnosed with AIDS

are likely to have major emotional reactions to the diagnosis is well-documented (Blechner, 1997; Flavin, Franklin, & Frances, 1986; Holland & Tross, 1985; Nichols, 1985; Perry & Jacobsen, 1986; Portegies, 1994).

Most reports about the psychological impact of AIDS have been concerned with the male gay and bisexual at-risk subgroups. However, psychological problems specific to patients with AIDS may, in fact, be amplified among substance users with AIDS who must cope with an addictive disorder as well as with major medical problems that are associated with acquired immune deficiency syndrome (Sorensen, Batki, Faltz & Madover, 1986). AIDS-epidemic researchers initially predicted that all patients with AIDS would be at risk for particular kinds of emotional problems regardless of whether or not they were male or female, or were members of either the homosexual or the heterosexual intravenous drug-using risk groups (Hays & Lyles, 1986). More recently, longitudinal studies suggest that emotional problems, particularly depressive disorders, are not an inevitable outcome at any stage of HIV-illness (Rabkin, 1997).

Psychological Complications of AIDS in Adults

A review of the early literature citing psychological complications of AIDS was undertaken by Detmer and Lu (1986). Their findings, based on an examination of medical and psychological journals indicate that psychological distress in AIDS and HIV disease is formidable. AIDS patients may present with adjustment disorder (Dilley, Ochitill, Perl, & Volberding, 1985), major depressive disorder (Perry & Tross, 1984), and organic mental syndrome with affective (Kermani, Borod, Brown, & Tunnell, 1985),

delusional (Nurnberg, Prudic, Fiori, & Freedman, 1984) or demented features (Navia & Price, 1986; Kermani, Drob, & Alpert, 1984).

Organic mental complications of Acquired Immune Deficiency were originally attributed to severe systemic illnesses caused by metabolic imbalance or they were associated with the presence of opportunistic infections. However, the alternative explanation for the severe psychiatric disturbance seen in AIDS patients (mania, personality change, psychotic disorganization) is that HIV directly infects and replicates in brain cells giving rise to pervasive neuropathological changes (Portegies, 1994). The onset of symptoms is usually gradual and may occur weeks or months before the patient with AIDS develops prodromal symptoms of immunodeficiency. Even when a fully oriented patient's overall psychological symptoms are sub-acute, subtle organic impairments in concentration, delayed memory recall or graphomotor abilities are often revealed on standardized intelligence or neuropsychological tests.

Perry and Jacobsen (1986) describe a cluster of organic mental syndromes including: grandiosity, suspiciousness, delusional thinking, hallucinations, psychomotor agitation, rambling and repetitive speech, confusion, and blunted affect. Organic mental syndromes are suspected in any person-with-AIDS who presents with atypical psychiatric symptoms, particularly if the individual has had good premorbid functioning and no family history of psychiatric disorder. Oftentimes the early symptoms of AIDS dementia are commonly attributed to reactive depression. Memory and concentration impairments are early features. Verbal and motor activities are usually slowed as well. Motor dysfunction most often develops after the cognitive symptoms appear. An inability to sequence complex verbal tasks, gait ataxia, and inefficiency with rapid alternating

movements are symptomatic. In a majority of patients there is a steady progression of impairment while, with others, dementia remits periodically.

Less frequently occurring than AIDS dementia is the development of frank organic psychosis with agitation, inappropriate behavior, or hallucinations. The most usual clinical profile of the disease is of subcortical dementia. AIDS-dementia complex can be considered as two groups of neuropsychological sequelae of the disease (Table 1). The first is chronic mental disorder in the form of subcortical dementia and the second consists of acute episodes of delirium. Symptoms can be viewed as being on a continuum beginning with subtle cognitive processing impairment and moving to delusional states; and finally, in some cases, active hallucinations and seizure disorders occur.

Table 1

Organic Complications and Symptoms in AIDS-Dementia Complex

Affective Blunting	Dementia	Delirium
sadness	cognitive deficits	grandiosity
general malaise	mental slowing	hyperactivity
withdrawal	gait ataxia	hallucinations
	dysarthria	flight of ideas
		paranoia
		psychoses

Background to Emotional Dysregulation in Children

The concept of emotional dysregulation in children implies an imbalance in the developmental processes of expected masteries or feelings of competence. Patterns of life-events and/or interpersonal relations as well as biological predisposition may influence emotional dysregulation. Prior research has shown that multiple life-change events in combination with negative psychosocial and interpersonal interactions in family groups can affect emotional development in children (Billings & Moos, 1983; Dohrenwend & Dohrenwend, 1974; 1981; Felner, Farber & Primavera, 1983; Hirsch, Moos & Reischl, 1985; Rutter & Madge, 1976).

Trad (1987) notes that emotional dysregulation in children may be manifested by dulling of perception (via depression or flat affect), or by a child's inappropriate (either reduced or exaggerated) responses to social and environmental situations. It affects various domains of personality by creating deficits in a child's affect, cognition, motivation and sense of self. Emotional regulation, on the other hand, refers to a child's ability to function both overtly and intrapsychically in a manner most likely to produce continued competency, mastery, gratification, and positive affect. In studies of children "at-risk" for emotional dysregulation, it is generally hypothesized that negative psychosocial and interpersonal interactions will be positively related to anxiety, reduced self-esteem and depression (Cohen, Burt, & Bjorck, 1987).

Although systematic data have not yet been obtained for this "at-risk" population of children with AIDS-diagnosed mothers, some studies have previously examined psychological development in "at-risk" children of substance abusing parents and in children of methadone-maintained mothers: parent populations which currently have high

rates of HIV-positive transmission within major urban centers. Children of heterosexual drug users and their partners have been studied in terms of an "intergenerational cycle" of addiction (Carr, 1975; Coppolino, 1975; Nichtern, 1973) wherein the behaviors, personalities, and attitudes of drug addicts have been investigated to determine possible adverse effects on the psychological functioning of their children. Some studies have found abnormalities in the children's behavior, cognition, development, and interpersonal relationships (Nichtern, 1973; Wilson, Desmond, & Verniaud, 1973; Wilson, Mc Creary, Kean, & Baxter, 1979), while other studies have shown these children to be developing normally (Franshel, 1975; Lodge, 1976; Sardemann, Madsen, & Friies-Hansen, 1975). However all of these studies relied on small samples, clinical observations, and poor subject selection without controls. The largest controlled study of school-age children of opiate addicts (n = 30) suggests that children, particularly sons of depressed female addicts, are at-risk for conduct problems, and poor social and cognitive development (Nunes et al., 1998).

Investigators (Bauman & Dougherty, 1983; Bauman & Levine, 1986) have also compared methadone-maintained women and their children with nonaddicted women and their children. The mothers' personalities, parenting attitudes, mother-child interactions and the children's developmental levels and behaviors were examined to explore the presence of any group differences. Results show that methadone-maintained mothers perform less adaptively on measures of personality and parenting. There was no difference between the two groups of mothers (methadone-maintained versus nonaddicted) on their parenting attitudes. Children of methadone-maintained mothers perform poorly on measures of cognition, development, and socially adaptive behavior.

Statement of the Problem

Children having an AIDS-diagnosed parent are developing within a multiplicity of serious environmental and interpersonal stressors. They are frequently parented by a severely medically compromised mother who may be depressed and likely to have only a minimal social support system due to AIDS stigma. In addition, children with an AIDS identified parent may experience anxiety and withdrawal from peers leading to an increased loss of self-esteem, isolation of affect, and both significant and subclinical depression (Horan & Sherman, 1987). Belfer (1986) hypothesized that children in such situations may introject guilt as though their parent's AIDS diagnosis was a form of retribution and, consequently, they see themselves as being "bad" children.

Empirical research on life stress for children in general is sparse: With this vulnerable population research is just emerging. Researchers (Reynolds, Anderson, & Bartel, 1985) have suggested that the optimal procedure for examining measures of children's adjustment is by means of the multitrait-multimethod technique postulated by Campbell and Fiske (1959): Validity is optimized when measures from different sources are obtained. In this investigation measures of participants' emotional functioning are obtained from two sources: the mother (inventoried estimates of offspring functioning) and the child (three self-report instruments).

This present study seeks to examine and describe psychological adjustment of children living with an AIDS-diagnosed parent in terms of the child's experience of anxiety, self-esteem and depression, and in terms of the mother's perceptions of her child's functioning. A further goal is to gather anecdotal, or descriptive, data about the life-experiences and life-perceptions of children whose mothers are AIDS-diagnosed in

order to obtain clinical material to broaden quantitative research analyses and expand the study's heuristic value for future investigators (Yin, 1984). It explores the effect of living with an AIDS-diagnosed parent on children's psychological functioning in order to identify coping patterns in their "life cycle" which might signal a need for early intervention. Specifically, are children living with AIDS-diagnosed mothers at risk for emotional dysregulation?

Research Questions

This study was designed to identify and describe psychological functioning in children who are living with an AIDS-diagnosed parent by examining three groups of children, i.e., children with AIDS-diagnosed mothers (AMC); children with methadone-maintained mothers (MMC); and, children of mothers in a demographically similar control group (CMC). Its purpose was also to answer the following research questions:

1.	What are the levels of self-reported emotional dysregulation among children of AIDS-diagnosed mothers (AMC), children of methadone-maintained mothers (MMC) and children of mothers in a demographically similar control group (CMC)?

2.	Are there significant differences in the levels of emotional dysregulation among the three groups of children (AMC, MMC, and CMC groups)?

3.	What are the levels of self-reported depression and anxiety among AIDS-diagnosed mothers (AMG), methadone-maintained mothers (MMG) and mothers in a demographically similar control group (CMG)?

4.	Are there significant differences in self-reported (a) depression and (b) anxiety among the three groups of mothers?

5. What are the relationships between the mother's estimates of children's overall behavioral functioning and children's self-reports of their own emotional functioning?

6. What are the multivariate relationships between the sets of maternal levels of depression, state anxiety, and trait anxiety with children's levels of depression, anxiety and self-esteem?

7. Is there a relationship, based on children's self-reports, between the length of time that women have been AIDS-diagnosed and emotional dysregulation in their children?

8. Is there a relationship between "disclosure" versus "non-disclosure" of a mother's AIDS-diagnosed status to children and the child's own self-reported levels of depression, anxiety and self-esteem?

9. What is the relationship between an AIDS-diagnosed mother's perceptions of her family's degree of supportiveness and self-reported emotional dysregulation in children?

Definition of Terms

1. <u>Children:</u> Children are defined as youngsters between the ages of 8 and 16.

2. <u>AIDS-diagnosed mother:</u> An AIDS-diagnosed mother has tested positive by means of the ELISA test for the Human Immunodeficiency Virus (HIV) and also meets the Center for Disease Control criteria for AIDS (presence of pneumocystis carinii or Kaposi's sarcoma, Cryptosporidium enteritis, or recurrent opportunistic infections).

3. <u>Methadone-maintained mother:</u> A methadone-maintained mother is one who receives methadone, a synthetic narcotic, under supervised medical treatment to aid in withdrawal from heroin.

4.   <u>Depression</u>: Depression may be viewed as a psychodynamic process evoked by loss (Sandler & Jaffee, 1965), a constellation of symptoms (Pearce, 1977), a specific clinical disorder (Weinberg, Rutman, Sullivan, Penick, & Dietz, 1973) or a pervasive reaction to stress (Graham, 1974). Overt symptoms are variable: sadness, loss of pleasure, lethargy or psychomotor agitation, difficulty in concentrating, appetite and/or sleep disturbance, low self-esteem, inappropriate or excessive guilt and thoughts of death. <u>DSM-IV</u> (American Psychiatric Association, 1994) classifies depression as a Mood Disorder that is subdivided into subtypes: Major Depressive Disorder and Dysthymic Disorder. Differential diagnosis between Major Depressive Disorder and Dysthymic Disorder is based on the severity and duration of symptomological presentations. Additionally, there is generally significant impairment in social and occupational functioning in Major Depressive Disorder while there is only mild-to-moderate impairment in social and occupational functioning in Dysthymic Disorder.

It is generally accepted that children may become depressed, but the definition of "depression" in children and its frequency as a diagnostic category in children remain controversial in the literature (Eastgate & Gilmour, 1984). Authors such as Brumback, Dietz-Schmidt, Warren and Weinberg (1977), who have attempted to establish uniform criteria for depression in children, present a rather broad symptomological spectrum: dysphoric mood, self-deprecatory ideation, aggressive behavior, sleep disturbance, changes in school performance and/or attitude, diminished socialization, somatic complaints, lethargy and, finally, significant changes in appetite or weight. For the purpose of this study, depression in children will be defined as their scores on the

Children's Depression Inventory (Kovacs, 1992). Depression in mothers will be defined as their scores on the Multiscore Depression Inventory (Berndt, 1986).

5.   Anxiety: Anxiety is an unpleasant affective experience characterized by "apprehension, tension or uneasiness from an anticipation of danger, the source of which is largely unknown," or "intrapsychic in origin" (American Psychiatric Association, 1984, p. 10). Underlying anxiety which is always present in individuals is characterological, or trait anxiety, which constitutes a person's general anxiety level. In addition, individuals may experience situational anxiety whenever life events threaten them psychologically.

Situational anxiety can be conceptualized more narrowly as "manifest anxiety:" muscle tension, shallow breathing, trembling, palpitations, butterflies in the stomach, confusion, feelings of unreality, inability to concentrate, irritability (Schaffer, 1947). Trait anxiety, according to Spielberger (1972), results from unresolved, unconscious psychological conflicts while situational anxiety reflects an irrational, conscious anticipation of negative consequences to oneself. Children's scores on the What I Think and Feel Test (Reynolds & Richmond, 1985), a revised measure of the Children's Manifest Anxiety Scale (Casteneda, Mc Candless, & Palermo, 1956), will be used as the definition of anxiety in children. Anxiety in mothers will be operationally defined in this study as mother's scores on the State-Trait Anxiety Inventory, Form Y (Speilberger, 1983a).

6.   Self-esteem: Self-esteem is an individual's desire to be held in high esteem by others, and to maintain a high opinion of their own behavior and person. In Coopersmith's (1967) classical investigation of self-esteem in children, he defined the construct as the "extent to which the individual believes himself to be capable,

significant, successful, and worthy. In short, self-esteem is a personal judgment of worthiness that is expressed in the attitudes the individual holds towards himself " (p. 5). For the purpose of this study, self-esteem in children will be operationally defined by scores on the Self-Esteem Inventory, Form B (Coopersmith, 1975).

7.   Emotional dysregulation: Emotional dysregulation reflects an impairment in a child's state of psychological well-being to such an extent that his/her developmentally expected adjustment patterns are either subjectively felt, or objectively perceived by others, as malfunctioning. For the purpose of this study, emotional dysregulation will be defined by children's self-reported levels of depression, anxiety and negative self-esteem. Emotional dysregulation will further be defined in this study as a mother's perceptions of her child's overall adjustment in terms of scores on the Conners' Parent Rating Scale (CPRS-48; Conners, 1989).

8.   Family supportiveness: Family supportiveness is defined as a mother's perception of the level of commitment, help and support family members provide to one another within the family system. For the purpose of this study, family supportiveness will be measured by scores on the Family Environment Cohesiveness Scale (FES-C Form R; Moos & Moos, 1974).

9.   AIDS disclosure: For the purpose of this study, AIDS disclosure will describe the situation when a child can be characterized as "aware" of their mother's AIDS-diagnosed status based on a parental report that the child has been clearly told that the mother has AIDS (i.e., the virus has been explicitly identified by name). When AIDS is nondisclosed, children have either been given no information with respect to their mother's medical condition or have been told only that their mother is sick.

Hypotheses

Generally, it is predicted that children having an AIDS-diagnosed parent would have significantly impaired psychological functioning. The present study tested the following a priori hypotheses:

Hypothesis 1.0: Maternal level of depression will be predictive of children's self-reported emotional dysregulation as measured by: depression, anxiety, and negative self-esteem for: (a) control group women; (b) women with an AIDS-diagnosis; and, (c) methadone-maintained women.

Hypothesis 2.0: AIDS-diagnosed mothers will report significantly greater levels of dysregulatory behaviors in their children when compared to children's ratings by demographically similar control mothers. In a like manner, it is also hypothesized that methadone-maintained mothers will report significantly greater levels of dysregulatory behaviors in their children than the control group of demographically similar mothers.

Hypothesis 3.0: There will be a significant, positive relationship between the length of time a mother of an 8-16 year old child has been AIDS-diagnosed and the severity of the child's self-reported levels of a) depression, and b) anxiety.

Hypothesis 4.0: It is further hypothesized that there will be a significant, inverse relationship between the length of time that a mother of an 8-16 year old child has been AIDS-diagnosed and a child's rating of his/her own self-esteem.

Significance of the Study

The present study was designed to examine the psychological functioning of children who are living with an AIDS-diagnosed parent. The AIDS epidemic has been characterized in the media as creating a growing number of new victims: "orphans of AIDS" who must deal with parental disability, social stigmatization and the possibility of eventual parental death (Dane & Levine, 1994; Lambert, 1989; Patterson, 1990). Clinicians who work with "at-risk" children in families with an AIDS-diagnosed parent frequently describe the children as depressed with low self-esteem. Many begin to act-out in school and/or experience academic failure. During treatment the children inappropriately take on parentified roles and/or display seriously regressed behaviors (R. T. Moynihan, personal communication, August 5, 1997). It is generally expected that AIDS, with its medical and psychological life-change consequences, may severely stress parent-child interpersonal interactions leading to increased emotional dysregulation for children living in oftentimes already dysfunctional and, possibly, drug-enculturated family systems.

Currently there is a vast literature concerning the psychological impact of the syndrome on adults and, to a lesser degree, on pediatric AIDS cases. However, there is a dearth of investigative data on children affected by AIDS in their families. In order to provide supportive service to these children in mental health settings and within the educational system an empirical understanding of their vulnerabilities and adjustment patterns is needed (Perkins, Woolridge, & Francis, 1987). An additional contribution of this study is to secure a population for longitudinal research into the effects, over time, of the AIDS epidemic on children's development.

Limitations of the Investigation

The purpose of this study is to begin to identify and to describe psychological functioning of children who are living with AIDS-diagnosed mothers by comparing three groups of children: children with AIDS-diagnosed mothers (AMC); children with methadone-maintained mothers (MMC); and, children with mothers from a demographically similar control group (CMC). Several methodological shortcomings in the comparative-group design of this study merit concern and must be acknowledged:

1. <u>Sample Size:</u> The unique sensitivity of AIDS-related research, as well as practical constraints, prohibits access to large sample sizes. As a result, the participants in this study are limited to 8-16 year old children of clients at three urban, Northern New Jersey centers which provide educative, supportive and referral services for women in "at-risk" community populations (AIDS-diagnosed clients; methadone-maintained clients; economically-disadvantaged clients). Therefore, the generalizability of the study is seriously limited.

2. <u>Participant Selection:</u> The children in this study are essentially "self-selected" by their mothers and, consequently, both external and internal validity may be effected. Moreover, the predictor variable (mother's group membership) is an assigned one so that the results of this investigation may be reflective of referral practice biases at the sites from which samples are drawn and not representative of findings gathered by a completely random selection process.

Additionally, each of the centers from which mother-child pairs are to be drawn strictly adheres to principles of client confidentiality and the client's right to privacy from

disclosure of sensitive information. The absence of confounding variable overlap could not be posited with certainty. Specifically, some AIDS-diagnosed mothers may substance use; some methadone-maintained mothers may be AIDS-diagnosed; some control group mothers may, in fact, substance use and/or have an AIDS-diagnosis.

3.   Research Instruments: The self-report instruments used in the study are psychometrically sound measures which, nevertheless, may be subject to respondent bias. As a consequence, the reliability of results in this study must await replication. Studies have generally shown consistencies between self-reported findings and data from diagnostic clinical interviews. However, future research will be needed in order to determine whether or not subject's self-reported psychological functioning in these particular populations will provide data comparable to information which might have been gathered from diagnostic clinical interviews.

4.   Sociodemographic and Family Variables: A multiplicity of sociodemographic and family variables have been reported in studies investigating psychological adjustment patterns in children which may confound, moderate and/or mediate significant research findings. For example, sociodemographic characteristics of children (age, gender, ethnic group, ordinal position, level of school competence) in addition to sociodemographic characteristics of their mothers (age, gender, SES, ethnic group, marital status) have been inconsistently associated with childhood adjustment. Moreover, family variables (marital discord, parent-child relational problems, availability of support networks) have also been associated with children's adjustment patterns.

Although the participants in this study were expected to have similar demographic

characteristics, (i.e., minority status and low socioeconomic backgrounds), it was not possible to control for other sociodemographic and family variables due to the small sample size and the absence of matched controls. Consequently, the present study does not examine the nature or the precise role of participants" sociodemographic and family variables. Therefore complex, and possibly, interactive relationships among these variables which may yield an even fuller understanding of the processes that influence children's adjustment patterns must await future research.

Chapter II

LITERATURE REVIEW

Introduction

This review addresses conceptual and empirical findings in the literature which indicate that there is a positive relationship between stressful life-events and emotional dysregulation in children. Studies of life-event consequences for children in terms of loss due to "significant other" terminal illness or death will be presented. The relationship between parental psychopathology and children's emotional functioning will also be explored. The review will discuss studies examining life-stress dysregulation outcomes in children with respect to depression, anxiety, and self-esteem.

Numerous studies have connected negative, stressful life-events to a variety of somatic and mental disorders in adults (Hollingshead & Redlich, 1958; Holmes & Masuda, 1974; Meyers & Pepper, 1972), but relatively less emphasis has been placed on correlates among psychosocial stressors in children. Most authors merely apply an adult model. Nevertheless, some researchers interested in child development have discussed significant psychological impact on children for a variety of traumatic and psychosocial experiences: divorce (Wallerstein & Kelly, 1980); birth of a sibling (Dunn & Kendrick, 1980); natural disaster (Newman, 1976); and, psychic trauma (Pruett, 1984; Terr, 1985). As Garmezy (1986) notes, however, the methodology of "stress," or risk-research, with children has been extremely varied (clinical case studies, retrospective life histories, biophysical data analyses) to the extent that only tentative conclusions can be drawn from

the literature. Additionally, research exploring the impact of negatively-perceived, psychosocial life-events on children's emotional functioning has also been varied and generally limited to cross-sectional rather than longitudinal approaches. Primarily empirical and atheoretical, cross-sectional methods use subject groups that vary in age, gender and demographic variables thereby restricting interpretability.

Longitudinal approaches (Gersten, Langner, Eisenberg & Simcha-Fagan, 1977; Swearington & Cohen, 1985) which have attempted to clarify relationships between negatively-perceived parental life-events (parental physical or emotional illness; unemployment; marital discord) and children's psychological functioning (anxiety; isolation; conflict with parents and peers; delinquency) suggest that there are no predictable associations. However, there is evidence from other studies to show that the chronicity of accumulated parental stressful life-events is positively correlated with impairments in children's emotional functioning (Billings & Moos, 1983). Psychodynamic literature, in contrast, has remained focused on traditional relationship stressors such as significant-other "loss" and parental psychopathology with their relative influence on children's emotional status. As Bowlby (1973) noted: "Whether a child or adult is in a state of security, anxiety, or distress, is determined in a large part by the accessibility and responsiveness of his principal attachment figure" (p. 23).

Despite numerous methodological weaknesses, prior research and clinical-case material suggests that increased risk for emotional dysregulation in children is associated with: exposure to traumatic events; negatively-perceived parental psychosocial factors; chronicity of accumulated parental stress; and significant-other "loss," (e.g., parental psychopathology; parental terminal illness; parental death). While there is an extensive

literature on the psychological impact of exposure to traumatic events in children as well as a vast literature for examining complex associations between parental psychosocial stressors and children's emotional development, it will not be reviewed here since the focus of this study is to describe the effect of maternal AIDS on children's emotional dysregulation outcomes (depression, anxiety, negative self-esteem). The broad perspective of significant-other relationship "loss" as a "loss" of parental responsiveness and accessibility stemming from parental terminal illness; parental death; and, parental psychopathology will be reviewed in the relevant literature.

At the present time, empirical research with children of AIDS-diagnosed parents is at an initial stage of early inquiry. Therefore, this study can only be thought of as exploratory and preliminary to others which will hopefully follow. Nevertheless AIDS, as a powerful societal, social and intrapsychic configuration, is indeed a traumatic negatively-perceived and often fatal psychosocial event generally associated by its transmissibility with stigmatizing life-styles (homosexuality, bisexuality, drug abuse). The syndrome can be viewed either as an antecedent of chronic parental stress (severe medical illness with related psychological impairments) or as a consequence of previous parental behavioral and/or interpersonal stressors (substance abuse; socially-disapproved sexual partnerships) which lead to increased parental stress, particularly in urban minority populations.

Theoretical Foundations of Emotional Dysregulation

Freud's (1925-26) position in Inhibition, Symptoms and Anxiety initiated interest into the relationship between significant-other "loss" and emotional dysregulation in children. Either a real, or an imagined, loss of a love object may lead a child to what can

be regarded as a "danger"...a state of "non-satisfaction, of a growing tension due to need, against which it [the child] is helpless" (p. 137). Psychoanalytic literature suggests that depression is the most likely outcome following "loss" (Abraham, 1921/1955; Bowlby, 1960; Bowlby, 1961; Freud, 1917/1957).

Depression and Anxiety

Karl Abraham (1921/1955) pioneered psychoanalytic study into depression by comparing it with anxiety, holding that both states result from repressed drives. In the case of the former, repression prevents the attainment of some desired gratification. In the latter an individual has, in essence, given up the hope of attaining gratification. Describing six clinical cases, Abraham postulated that depression results when repression is so complete that an individual feels totally unloved and despairs of all further psychic intimacy. Through a complicated process the depressed person blocks unacceptable ambivalent hatred of others by projecting hostility onto others. According to Abraham, depression is accompanied by massive guilt because of an individual's basically unconscious destructive fantasies towards others and guilt then becomes an internalized self-identity (1955, p. 146).

In his short essay, Mourning and Melancholia (1917/1957), Freud conceptualized a distinct difference between mourning and melancholia although each has a similar symptomological presentation: dysphoria with diminished activity rates. Mourning, to Freud, signified the natural grieving process following a loss while in melancholia there was no objective "loss." With melancholia the nature of the loss is vague and the individual exhibits reproachful, lowered self-esteem. The melancholic individual was

thought to have formed an intense object relationship in childhood which was subsequently undermined because of disappointment with the loved object. Consequently, libido is withdrawn from the object and introjected into the ego where it becomes scorned. Losses which occur later in life may reactivate an original childhood loss causing the vulnerable adult's scorn/rage to be re-experienced as self-hatred. According to Arieti and Bemporad (1978), Freud's seminal formulation of the dynamics of depression recognized the interpersonal component (loss of a love object) as well as the relationship between antecedent ambivalence prior to loss with its subsequent injury to a person's self-esteem.

Depression and Self-esteem

The relationship between self-esteem and depression has been studied by Jacobsen (1946, 1954), Bibring (1953), and Sandler and Jaffe (1965). Jacobsen's complex theory of psychological development holds that disappointments in a child's belief in parental omnipotence leads to a devaluation of "self" since the self, in children, is fused with internalized representations of significant-others. Depressed states, according to Jacobsen, result from: (a) the lack of separation of object representations from the childhood parental ideal; (b) an aggressive cathexis of self; and, (c) poor differentiation of the superego.

In contrast to the complicated formulations of Jacobsen, Bibring's theories are elegantly simple. Depression is defined as an "emotional expression (indication) of a state of helplessness and powerlessness of the ego, irrespective of what may have caused the breakdown of the mechanism which established his self-esteem" (1953, p. 24).

Hence, depression can be viewed on a continuum of severity which is possible in all individuals: normal, neurotic, or psychotic.

Sandler and Jaffe's (1965) conclusions are similar to Bibring's and were developed through their clinical work with children. These authors find depression to be much like anxiety which is experienced when a child believes that the loss of something essential to their well-being is irreparable. They note what is actually lost "is the state of well-being implicit, both psychologically and biologically, in the relationship with the object" (1965, p. 91).

Stress Hypothesis

The General Adaptation Syndrome (Selye; 1956, 1969), or stress hypothesis, permits an integrated understanding of anxiety, anger, guilt and depression in children. As construct, the General Adaptation Syndrome holds that chronic unmanageable environmental or interpersonal demands cause an individual to go through three identifiable response reactions: (a) alarm and mobilization; (b) resistance; and, (c) exhaustion. According to Curtis (1982) when:

> The psychological immune system or resistances, i.e., the ego defenses,
>
> fail to provide adequate protection and when the concomitant emotional reactions
>
> interfere with the individual's performance in specific areas -particularly in
>
> relationships...a destabilization of personality and maladaptive behavior may
>
> occur. (p. 1208).

Hence, the General Adaptation Syndrome subtly addresses a continuum of psychological "destabilization" processes: anxiety, anger, and depression which are emotional outcomes

reflective of stress and correlates of the construct of emotional dysregulation: anxiety, negative self-esteem and depression.

Childhood Depression Symptomology and Emotional Dysregulation

Although the presence and diagnosis of depressive illness in adults is common, until recently depression in children was not widely accepted. In a review of the early theoretical differences revolving around childhood depression, Giesa and Mc Laughlin (1982) cited two major points of view. The first was held by theorists like Glaser (1968) and Kovacs and Beck (1977) who reported that childhood depressive disorders were different from adult syndromes and were not manifested by overt depressive syndromes. Glaser, in particular, held that depression in children was "masked." He, and others such as Toolan (1962), believed that depressive feelings in children were displaced to behavioral problems and antisocial behavior. Symptomology was varied: tantrums, school phobia, disobedience, irritability, aggressiveness; however, many of the classical features of depressive illness were also present in children (Table 2).

The second position was that childhood depression existed with both similarities and some unique differences from adult depressive disorders (Cytryn & Mc Knew, 1972; Poznanski & Zrull, 1970; Spitz & Wolfe, 1946). Pozanski and Zrull examined hospital charts of nearly 2,000 children up to age 12. The most frequent disturbance seen within depressive symptomology in children was negative self-esteem. Bawkin's (1972) findings were supportive: loss of self-esteem appeared to be the underlying dynamic of childhood depression with headaches and poor appetite comprising the major presenting symptom constellations.

Table 2

Symptoms Reported in Selected Early Studies of Childhood Depression

---

Characteristic Symptoms	Study

Social withdrawal

School Difficulties

Headache/stomach ache

Aggression   Freeman, Poznanski, Grossman,

Obsessive concerns   Buchsbaum, & Banegas, 1985

Paranoid ideation

Sleep/eating disturbance

Dysphoria/ Social withdrawal

Sleep difficulties

Cognitive impairment   Poznanski, Grossman, Buchsbaum,

Agitation   & McKinney, 1984

Morbid ideation

*Impaired self-esteem

Melancholy

*Self-deprecation   Eastgate & Gilmore, 1984

Sleep disturbance

Aggressive behavior

Separation anxiety

Hyperactivity/ Learning problems

Somatizations   Phillips, 1979

Sadness

Table 2 (continued).

---

*Self-deprecation

*Self-deprecation
Agitation/ Temper tantrums/ Aggression
Sleep disturbance
Change in school performance
Dysphoria/Social withdrawal   Brumback,, Dietz-Schmidt,
Somatic complaints   & Weinberg, 1977
Change in appetite

Sleep/weight changes
*Self-deprecation   Weinberg, Rutman, Sullivan, Penick,
School weakness   & Dietz, 1975
Dysphoria/Withdrawal/Aggression

School failure
Aggressiveness
Psychosomatic complaints   Cytryn & McKnew, 1972
Guilt/hopelessness
Negative dream content

Sadness/Loneliness
*Negative self-esteem   McConville, Boag & Purohit, 1973
Feelings of being "wicked"

*Negative self-concept
Irritability/Aggression   Bawkin, 1972

Table 2 (continued).

Mood change/Withdrawal

School phobia   Ling, Oftedal & Weinberg, 1970

Persecutory ideas

*Self-deprecation

Irritability

Tension/explosiveness   Frommer, 1968

Enuresis/Encopresis

Tantrums

School phobia

*Loss of self-esteem   Glaser, 1968

Hopelessness

Disobedience

Self-destructiveness   Toolan, 1962

Boredom/apathy/restlessness

Note. Asterisk denotes classical features of depressive illness in children.

Weissman, Orvashel & Padian (1980) also noted many overt similarities between adult and childhood depression, but found that symptoms in children change with age. Moreover, certain overt depressive features typically found in adults were seen infrequently in the cases of childhood depression which they examined. For example, psychomotor retardation is not commonly found in children (Kashani, et al., 1981).

In an important study based on their work with a group of inpatient children (ages 6-13), Mc Conville, Boag, and Purohit (1973) described three types of childhood depression: (a) affectual depression, (b) negative self-esteem depression, (c) guilt depression. Affectual depression was commonly observed in six-to-eight year old children. It was characterized by sadness, feelings of helplessness and occasional hopelessness. Negative self-esteem depression was typical for eight-to-eleven year olds. It was characterized by feelings of worthlessness. Guilt depression, although relatively uncommon, occurred after age eleven. The child had feelings of "evilness" or self-destructive ideation.

Despite a significant body of empirical literature which examines symptomological manifestations of childhood depression or depressed functioning, research interpretation and generalizability remains complicated. Most of the early literature was based on clinical interviews children who were already in some form of treatment due to their maladaptive functioning; other studies have relied on non-standardized techniques (parental report; rating scales) to assess the children's functioning. Therefore, it is necessary to acknowledge that the diagnostic criteria in the literature which has been used to identify and describe childhood depression remains somewhat problematic and, additionally, that a possibility of sampling bias due to an over-representation of clinical population cases cannot be dismissed.

In 1987 the American Psychiatric Association replaced the DSM-III classification "Affective Disorder" with "Mood Disorder" in its revised third edition of the DSM-III-R (American Psychiatric Association, 1987). "Mood Disorder" was further divided into "Bipolar Disorders" and "Affective Disorders." In the fourth edition of the DSM-IV,

published in 1994, the category of "Mood Disorder" was further subdivided: Depressive Disorders; Bipolar Disorders; Mood Disorders Due to a General Medical Condition; and, finally, Substance-Induced Mood Disorders.

At least five of the following symptoms must be present for a two week period to be considered in diagnosing Major Depressive Disorder: depressed mood; anhedonia; significant weight gain or loss; sleep disturbance; psychomotor agitation or retardation; fatigue; feelings of worthlessness; diminished ability to concentrate; recurrent thoughts of death. Dysthymic Disorder is characterized by more chronic, less severe depressive symptoms that must be present for at least a two year period. The symptoms of Major Depressive Disorder and Dysthymic Disorder are the same for adults and children. However, in children and adolescents with a Major Depressive Disorder or a Dysthymic Disorder, depressed mood may present as irritable mood. Another essential difference between the diagnosis of Major Depressive Episode in adults and children is that psychomotor agitation, somatic complaints and auditory hallucinations are frequent in prepubertal children. Anxiety disorders (separation anxiety, overanxious disorder, avoidant disorder) are also common in children. With respect to adolescents, DSM-IV notes antisocial and/or negativistic behaviors along with, in some cases, substance abuse or substance dependence as prominent depressive features.

By virtue of its broadness, DSM-IV incorporates all of the varied symptomological presentations that have been associated with childhood depression by prominent theorists and researchers (Cytryn & Mc Knew, 1972; Glaser, 1968; Kovacs & Beck, 1977; Poznznski & Zrull, 1970; Spitz, 1946). However, considerable diagnostic confusion arises from different uses of the term depressive functioning or "childhood

depression" in the literature. It is prudent to bear in mind their varied symptomological presentations: anxiety, low self-esteem, and depression are key features.

Significant-Other "Loss" and Emotional Dysregulation

Parental Terminal Illness

Studies documenting psychological stresses which terminal illnesses exert on families may be examined to determine the effect of serious parental illness on children's emotional functioning. Generally, these studies have been confined to spouses of patients or parents with seriously ill children (Regan, 1965; Adams, 1978) or are concerned with family intervention strategies for hospitalized, terminally ill parents (Adams-Greenly & Moynihan, 1983). Sourkes (1980) points out that children frequently have two versions of serious illness: first, the medical version of the illness that is given to them; and second, their own private version of the illness which may reflect frightened thoughts. Nordlich (1982) observed that the concept of death is universally confusing to many children for whom illness causality may be fused with wishful omnipotence. Feelings of frustration and anger as well as destructive fantasies may be present in children having a terminally ill parent. When death of a parent is imminent, Nordlich surmised that feelings of guilt became unavoidable, particularly in pre-adolescent children.

Prospective studies of children living with a terminally ill parent are generally limited to clinical case presentations of children who have been receiving some form of psychotherapeutic treatment prior to parental illness. In a study by Wellisch (1979), six clinical cases (adolescents ages 13-18) with diagnosed cancer in their mothers were

described. In all of the cases family mental health consultation was sought by hospital personnel for the identified patient and not for the adolescent.

The three females in the study were judged as engaging in risk-taking behavior (sexual promiscuity, overuse of alcohol). Refusal to visit the parent occurred and, in two cases, the clinical impression of these subjects was that they presented as sullen, mute and withdrawn. The males in the study also evidenced refusal to visit their mothers and they engaged in risk-taking behaviors (drug and alcohol use). Additionally, all of the adolescents were described as exhibiting agitated separation anxiety and -in a single case- suicidal ideation. This study, while clinically interesting, was not empirical: family background was absent and clinical judgment substituted for more objective evaluative criteria.

In a study by Rosenheim and Reicher (1986) of 24 children (ages 6-16) with a terminally ill (cancer) mother (n = 5) or father (n = 3), the authors found that patient-parents were generally unaware of the degree of affective distress in their children based on either children's self-report measures of anxiety (Castaneda, McCandless & Palermo, 1956; Anxiety Scale for Children) or by parental estimates of their child's overall behavior (Elitzur, 1979; Behavior Evaluation Scale). Furthermore, there was no significant association between measures of the terminal patient-parent's anxiety (Taylor, 1953; Manifest Anxiety Scale) and children's self-reported anxiety. Rosenheim and Reicher concluded that children having a terminally ill parent are generally lonely and anxious and that patient-parents are not able to clearly recognize their children's psychological neediness. They speculated that the terminal illness process absorbs

physical and mental family resources to such an extent that the emotional needs of children may be overlooked or defensively denied by the patient-parent.

Rosenheim and Reicher (1985) also compared the effect of "informed" versus "noninformed" of serious parental illness (cancer) on children's levels of self-reported anxiety in order to explore whether or not a widely-held clinical impression that improved coping occurs in when the fatal nature of parental illness is disclosed to children. The authors speculated that disclosure of serious parental illness may be a moderating variable for increasing children's adaptive coping. In a sample of 44 children (ages 6-16) whose parents (n = 16) were disabled by terminal cancer and required daily care at home, Rosenheim and Reicher found that "uninformed" preadolescents (10-12 years) self-reported significantly greater levels of anxiety (Castaneda, McCandless & Palermo, 1956; Anxiety Scale for Children) than adolescents (15-16 years) and latency children (6-9 years) who were "uninformed." The "informed" children self-reported less anxiety across all age groups. The results of the study supported the clinical impression that children in families which are able to disclose the seriousness of a parental terminal illness to them experience lower levels of anxiety in contrast to children from families where potential parental death is held as a "family secret."

Parental Death: Anticipatory Grief and Bereavement

The literature on children's anticipatory grief, immediate responsiveness to parental death, and their bereavement patterns is fairly inconsistent relying mainly on clinical-descriptive case material (Arthur & Kemme, 1964; Black, 1978; Furman, 1986). The only controlled study of bereaved children was done in 1966 by Rutter. He found

that over twice as many children attending a psychiatric clinic had lost a parent by death as would be expected from comparable parental death-rates in the general childhood population. In Rutter's study there was no clear association between parental death and any specific psychiatric syndrome in offspring. Arthur and Kemme, however, reported a high incidence of depressed mood, phobic disorder, and school refusal among bereaved children.

A prospective study of the bereavement process in children (ages 5-12) was reported by Mc Conville, Boag & Purohit (1983) who described the reactions of residents (N = 18) in a Children's Home after a fire during which two of the residence's administrators died. The youngest children tended to use denial as a defense mechanism taking a longer period to recover from the effects of the loss. These findings are consistent with Furman's (1986) observations from her clinical case studies: "the younger the child, the more total the overwhelming, the less available the mother's auxiliary ego"..."the slower are the steps in the reparative process" (p. 204). According to Furman, younger children exhibit phobias and impaired drive regulation; older children tend to "wall off" traumatizing experiences by "withdrawal" and "affect-block" with decreases in self-esteem and feelings of guilt.

There is also no general agreement in the literature about children of any one age being at particular risk. Rutter's (1966) study suggests that the significant age for loss associated with later disturbance is 3 to 4 years old. Birtchnell (1972a) found significant associations with psychiatric disorder only in adults who were bereaved before the age of ten. Hill (1969), however, found bereavement between 10 and 14 years of age to be significantly correlated with depressive illness in adulthood.

Sex differences in children were incorporated into studies of depressive vulnerability when Brown, Harris and Copeland (1977) reported that depressive illness in adult women was associated with loss of the mother if the loss occurred in young girls before age eleven. However, having an older sibling of the same sex as the deceased parent reduced the risk of adult depressive disorder. Birth-order, specifically, being the first-born in a family appeared to increase depressive vulnerability risk (Birtchnell, 1971).

When Arthur and Kemme (1964) compared loss of parent of the same sex with loss of the opposite sex parent they found denial prominent in the first group and guilt most associated in the latter group due to what they posited as some past hostility toward the parent. An important consideration can be drawn from the Rutter study: length of the preceding parental illness affects outcome. In one-third of the disturbed children in his study, the parent had been ill for at least one year. It is evident, therefore, that anticipatory grief and subsequent childhood bereavement are complex processes with numerous interweaving variables. Regardless of one's definition of "loss", anticipatory grief and bereavement may produce insecurity, inadequacy, feelings of worthlessness and guilt sufficient to influence a child's entire personality.

In 1969, Munro and Griffiths retrospectively compared five patient groups with four unmatched control groups for "loss" in terms of parental death (mother, father, both, either). Their only significant finding was that children who experienced maternal loss in childhood (ages 0-15) evidenced greater depression than random census controls. This finding replicated an earlier community study undertaken by Langner and Michael (1963) in which adult psychopathology was associated with both maternal and paternal death in

childhood amongst low socioeconomic status groups. When parental social class was controlled, however, it was found that adult psychopathology was correlated solely with maternal death and only in the lowest social class group.

In a study done by Birtchnell (1970) with 500 adult psychiatric (depressed) patients matched for age and sex with subjects from the general population, both maternal and paternal death up was pathogenic for female children up to the age of four. Birtchnell (1972a) eventually replicated these results: loss of either parent was a significant factor in serious depressive symptomology in adulthood for female children experiencing the loss between birth and age nine. For males, only maternal death before age nine correlated with later adult psychopathology.

Another study done by Birtchnell (1972b) attempted to control for social class with the same subject population. Its findings directly contradict Langner and Michaels' report on the relationship between parental loss in low socioeconomic status families and adult depression. It can be argued that inconsistent findings with respect to the effect of social class and the effect of either maternal or paternal death in childhood reflect the rather general investigative use of non-matched control groups and researchers' reliance on retrospective accounts of psychiatric hospital patients.

Despite methodological flaws, parental "loss" in childhood is considered by many clinicians to be one of the early "stressor" experiences most likely to lead to adult psychopathology (Tennant, Smith, Bebbington & Hurry, 1981). While many studies appear to demonstrate a distinct relationship between childhood "loss" and adult depression, others do not. As a result, empirical evidence for an association between "loss" and eventual maladjustment has been inconsistent.

Broadly speaking, there are three methodological limitations that have contributed to inconsistent research findings. First, "loss" in childhood is poorly defined: parental death, deficient parenting, parent-child separation. Second, the term "adult disorder" varies across empirical research with the majority of studies using psychiatric in-patient subjects and general hospital patients as controls. Third, an inadequate control of confounding variables (parental age at the subject's birth, marital status of the parent, sibling rank order of the adult subject, parental suicide versus natural or accidental death) is a major interpretational dilemma.

Parental Psychopathology

Destabilization of personality in children and/or their maladaptive behavior in response to "stress" due to parental psychopathology is well documented particularly with respect to offspring of schizophrenic parents. It appears that children of parents having major psychiatric disorders (particularly schizophrenia), or with significant affective disturbances, are at a comparatively higher risk for the type of disorder manifested by their parents as well as for a variety of other behavior and mood disorders. A child's risk status increases in proportion to the number of impaired significant others with whom the child interacts on a regular basis (Rutter, Quinton, & Yule, 1977). Environmental stressors like parental unemployment, marital discord, lack of community supports, and low socioeconomic status contribute to vulnerabilities in psychological functioning for at-risk children (Stiffman, Jung, & Feldman, 1986).

Investigators have established that children who have at least one parent with affective disorder have significantly increased rates of depression and other

psychopathology than children whose parents have no history of affective illness (Beardslee, Bemporad, Keller, & Klerman, 1983; Weissman, Prusoff, Gammon, Merikangas, Lechman, & Kidd, 1984). There has also been ample documentation of a high frequency of depressive disorder in adults whose retrospective accounts suggest major difficulties in their parents' emotional functioning (Jacobson, Fasman, & Demascio, 1975; Parker, 1979). Moreover studies of clinically depressed children also reveal high rates of depression in parents (Mc Knew & Cytryn, 1973; Philips, 1979).

In a literature review of children with parents diagnosed with major affective disorder Beardslee, Bemporad, Keller and Klerman (1983) cited twenty-four cross-sectional and longitudinal studies. Nearly 45% of all children examined in the studies presented with a psychiatric diagnosis. A large percentage of the diagnoses given to the children were for affective disorders. Depressive symptoms were reported in a particularly high proportion across the reviewed studies.

Several studies examining relationships between parental psychopathology and adjustment patterns in offspring have reported research findings by age which permit observations about the varied manifestations of emotional dysregulation for different ages and developmental levels in children. For example, in school age children 6-12 years old, Weissman, Paykel & Klerman (1972) reported excessive rivalry with peers and siblings, feelings of depression, hyperactivity and school problems in children of outpatient-clinic mothers ($\underline{n}$ = 40) diagnosed with moderate-to-severe depressive illness. Adolescent children (age 13-18) of parents ($\underline{n}$ = 16) with unipolar depression, who were studied by Weissman and Siegal (1972), evidenced defiant behavior, rebellion and withdrawal.

While these studies are supportive of impaired psychological functioning in children having a parent with a major affective disorder, serious methodological issues are apparent. The outcomes assessed (behavioral disturbance, psychopathology, school performance) and the methods of obtaining data (parent questionnaire, parent interview, child interview, teacher ratings, psychological testing, peer rating) vary considerably among studies. Very few of the studies reviewed by Beardslee et al. (1983) employed control groups. Only four studies used diagnostic criteria for the children with most authors assessing only "levels" of impairment. Additionally, the criteria for major affective disorder in the parent varied across studies. Not surprisingly Beardslee and his associates speculated that impaired functioning in children of affectively disordered parents results from some combination of genetic and/or psychosocial variables.

Weissman, et al. (1984) gathered data on 194 children (ages 6-18) of probands with major depression and compared them with children of normal controls. Psychosocial variables of the parent (sociodemographic characteristics, early history and family history of illness) were examined to determine whether these factors increased the risk of major depression or any other DSM-III (American Psychiatric Association, 1980) diagnosis in the children. Variables which did not increase offspring risk were: current age and sex of the parent; family's social class; number of children in a family. Parent variables which did increase the risk factor for children were: early age of depression onset; number of first degree relatives with psychiatric illnesses; and marital status (separated, divorced or widowed). The authors found that children of depressives were at increased risk for psychological symptoms with major depression as the most common disorder followed by attention deficit disorder and separation anxiety.

Like Orvaschel, Weissman, Padian and Lowe (1981) and Puig-Antich (1980), these authors found evidence for the existence prepubertal depression in children. In agreement with Cytryn, Mc Knew, Bartko, Lamour & Hamovit (1982), they found no effect for sex of the child on rates of depression. Subsequent studies, however, found significant sex differences in terms of the effect of maternal versus paternal depression on offspring.

Keller, Beardslee, Dorer, Lavori, Samuelson and Klerman (1986) studied 72 children (ages 6-19) from 37 families having at least one biological parent with a depressive disorder excluding families having histories of mania, schizophrenia, or schizoaffective disorder. Almost every measure of severity and chronicity of depression in the parent had a statistically significant association with impaired adaptation and the presence of a DSM-III diagnosed disorder in children. Depression in the mother was more strongly associated with increased psychopathology in the children than was depression in the father.

The earliest onset of major depression in children occurred at age 8 with a sharp increase in the risk for the first occurrence of an episode during mid-adolescence. Although girls had higher rates of depressive disorder than boys, the difference was not statistically significant. Sixty-five percent of the children received at least one diagnosis of disordered functioning and forty-six percent received two or more clinical diagnoses. (Specific diagnoses of the children are in Table 3.).

Major depression and oppositional disorder were the most frequent diagnostic classifications for children in the study. An association between lower social class (Hollingshead-Redlich Scale-score of the father) was consistent with expectations

Table 3

DSM-III Diagnoses in Children with a Chronic Depressed Parent

Diagnoses	Percent of Children
Major depression	24
Oppositional disorder	18
Conduct disorder-socialized nonaggressive	8
Dysthymia	8
Attention deficit disorder	7
Overanxious	7
Enuresis	7
Alcohol Abuse	7
Phobic Disorder	6
Conduct disorder-socialized aggressive	4
Reading disorder	4
Separation anxiety disorder	3
Avoidant disorder	3
Other drug/substance abuse	3
Other :drug dependence	3
Other : hyperactivity, bulimia, encopresis, obsessive-compulsive disorder, depressed adjustment disorder	3.4

Note. From M. Keller, W. Beardslee, D. Dorer, P. Lavori, M. Samuelson, & G. Klerman in Impact of severity and chronicity of parental affective illness and adaptive functioning and psychopathlogy in children, Archives of General Psychiatry, 43, (1986), pp. 928-935.

(Langer & Michael, 1963) as was the finding for an association between marital discord (separation) and children's adaptive impairments. According to Keller et al. (1986), these findings support developmental theories pointing to a greater importance of the mother to a child's overall psychological growth. However, since the mother was typically the only informant in this study, and the number of depressed fathers (n = 3) was far smaller than the number of depressed mothers (n = 20), their conclusions merit cautious interpretation.

Hammen, Adrian, Gordon, Burge and Jaenicke (1987) hypothesized that depressed mood in the mother, even if independent of psychiatric diagnosis, would be associated with negative outcomes in children. Although their findings are generally consistent with those of Weissman et al. (1984), the relationship between maternal psychiatric status and child disorder is complex. Comparing 42 boys and 42 girls (ages 8-16 years old), of mothers in four groups: unipolar affective disorder (n = 13); bipolar affective disorder (n = 9); a medical comparison group of arthritic or diabetic mothers (n= 14); and, a normal control group (n = 22), they found high lifetime rates of psychopathology in offspring for children of unipolar (74%) and bipolar (92%) mothers.

Moderately high rates (50%) of impaired functioning and psychopathology were found for children in the medical group with a significantly lower rate (29%) for the normal control-group children. Rates of affective disorders (including minor depression) in the children showed a somewhat similar pattern: unipolar (74%); bipolar (67%); medical (44%); and normal control, 17 percent. Interestingly, children of unipolar mothers showed higher rates of major depression (42%) and dysthymic disorder (32%) than did children with a bipolar disordered mother (25% and 8%, respectively).

Hammen and her colleagues (1987) used hierarchical multiple regression analyses statistical procedures in their study. In contrast to the findings of Keller and his associates (1986), their study revealed that neither marital status ("married" or "not married") nor socioeconomic status (when these predictor variables entered the equation last after maternal variables had entered the equation) contributed incrementally to children's' outcomes. Hammen and her colleagues concluded, therefore, that it is primarily a mother's depressive symptomology rather than any specific sociodemographic pattern which predicts children's functioning, particularly with respect to social and school performance.

Investigators have also examined psychopathology in the offspring of anxiety disordered parents. Again, there is some evidence from twin studies and family history data that a genetic factor may exist (Crowe, Noyes, Pauls, & Slymans, 1983). However, whether this genetic factor is biological, environmental, or a combination of the two has yet to be determined. Data available from the 1984 family history study by Weissman, Lechman, Merikangas, Gammon, and Prusoff indicates that children of probands with depression plus panic disorder have higher degrees of anxiety (separation) than children of anxiety-free depressed probands. However, the authors did not directly assess the children using, instead, mother's questionnaire reports. As Andreasen, Endicott, Reich and Coryell (1986) point out, reliance on family history data in place of direct examination tends to underestimate rates of psychopathology in children.

In order to address these methodological criticisms, Turner, Beidel and Costello (1987) looked at children (ages 7-12) of disordered parents ($\underline{n}$ = 15). Sixteen of the children were the offspring of a parent with anxiety disorder (agoraphobia or obsessive-

compulsive disorder); fourteen were the offspring of a parent with dysthymic disorder; and, 13 were the offspring of a parent with no identified psychiatric disorder. Using a battery of self-report inventories and standardized psychological inventories, the researchers found that offspring of anxiety disorder parents were significantly different from the normal control-group children.

Specifically, children of anxiety disorder parents reported more difficulties at school, fewer friendships, more specific fears and somatic complaints, and, finally, more depressed mood states than either of the other two groups of children. Additionally, the children of anxiety disorder parents were statistically more likely to meet criteria for a DSM-III childhood anxiety disorder than children of normal controls with the former children more than seven times likely to be given such a diagnosis. The children of the anxiety disorder parents were twice as likely to reach criteria for such a diagnosis than the offspring of the dysthymic parents. Interestingly, children of anxiety disordered parents and children of dysthymic parents did not differ on measures of "state anxiety" (self-report measures of number of fears experienced and "anxiety proneness").

The research findings are supportive of Rutter's classic study (1966) showing that the presence of any emotional disorder in parents creates a greater risk for psychological disturbance in their children. Despite of methodological problems such as small sample size, reliance on self-report inventories, inadequate control groups, and the absence of uniform diagnostic criteria it seems apparent that children with affectively disordered parents are at significant risk for emotional dysregulation although the magnitude and mechanisms of such risk are unclear.

Chapter III

METHODOLOGY

The purpose of this chapter is to describe: (a) the methods used to obtain the sample; (b) the participants in the study; (c) the instruments used to measure the variables in the analyses; (d) the procedures used to collect the data; (e) the statistical analyses used to determine whether the results of the study support the research hypotheses; and, (f) the statistical analyses used to address the research questions.

Methods Utilized to Obtain the Sample

Participation in the study was voluntary. Potential participants were drawn from three urban North New Jersey facilities that provide community advocacy, supportive services and recreational programs for women and children: SJH; PCC; FEC. Potential participants for the AIDS-diagnosed Mothers group (AM) of mother-child dyads were drawn from a population at the SJH. Potential participants for the Methadone-maintained Mothers group (MM) of mother-child dyads were obtained from the PCC site. Mother-child potential participants for the Community Sample Mothers group (CM) of mother-child dyads were recruited from clients at the FEC.

The SJH center is one of New Jersey's leading AIDS counseling agencies. It provides services to residents of northern New Jersey through its community mental health center located in Paterson. The center also provides free, comprehensive and confidential social services and preventive education programs to HIV positive

individuals and families throughout the state of New Jersey. SJH also provides comprehensive services to long-term HIV positive clients and newly diagnosed cases. At the inception of this study, 29 AIDS-diagnosed women participated in programs that included support groups, educational advocacy (health care benefits, housing, legal services and recreational services), assistance with medical appointments and crisis intervention.

The PCC research site is also located in Paterson, New Jersey. It provides medical supervision, counseling and social services to approximately 600 methadone-maintained clients from three counties. At any given time at about 30 women with children participate in weekly support groups through the PCC. The PCC support groups address issues in substance abuse, health and nutrition. They also provide an advocacy forum for obtaining housing, food, and recreational services for their clients.

The FEC research site was established in 1970 in Paterson, New Jersey as a multipurpose community center. It provides a variety of educational, group counseling, advocacy and referral services to approximately 300 families in the city. Approximately 90 women with children are generally enrolled in the FEC After-School Care Program where mothers can participate in monthly group meetings that provide parent education and counseling.

A formal research proposal was presented to the directors of the three research sites outlining the nature and intent of this study. The necessary assurances regarding confidentiality and anonymity for research purposes were provided in accordance with Department of Health and Human Services guidelines for AIDS research with human subjects (NIMH, 1984). Counselors blind to the scope of the study distributed Participant

Solicitation Letters (Appendix A) to all clients who were participating groups at the three research sites: SJH; PCC; FEC.

The researcher obtained the name, address and/or telephone number of potential participants who expressed interest in participating in the study. Exclusionary criteria were discussed with potential participant mothers after they made contact with the researcher. Exclusionary criteria for children included age (younger than 8, older than 16), as well as children medicated for depressive-like syndromes or significant medical illnesses (seizure disorder, neurological problems). Whenever potential participant mothers had more than one child, research participation was restricted to the oldest child in the family who was between 8-16 years old. No exclusionary criteria was applied to mothers except that they resided with the subject child for at least one year prior to participation in the study. Appointments for research participation were made by the researcher during a subsequent telephone call, by mail, or by in-person contact with them.

Participants

Participants consisted of 50 children, ages 8 through 16, and their respective mothers. The total population of mother-child pairs (N = 50) contained three target groups: Group I consisted of 14 children (AMC) with an AIDS-diagnosed mother (AMG: n = 14); Group II consisted of 12 children (MMC) with a methadone-maintained mother (n = 12: MMG); Group III consisted of a community sample of 24 children (CMC) and their mothers (n = 24: CMG).

Participants were not matched for ethnic group or socioeconomic status because research has demonstrated that these factors have not significantly affected the research instruments. The parents were not the primary subjects of the study and, therefore, were

not matched. However, a measurement of socioeconomic status (SES), using the using the Hollingshead (1975) Four-Factor Index of SES, was obtained and reported.

Research Instruments

In conducting this study, the following instruments were used. Reliability and validity data are presented.

Children's Depression Inventory (CDI)

The CDI is a 27-item self-report inventory designed to assess overt depression in children between the ages of 8 and 17 (Kovacs, 1992; Kovacs & Beck, 1977) which evolved from the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). The examiner reads the items aloud and the child marks the answer on the inventory. Each item is scored on a 0 to 2 point scale. Items are to be answered in relation to behaviors experienced or manifested over the previous two weeks. There are no subscales.

Reliability: The CDI has acceptable internal consistency, ranging from an alpha of .87, based on a large sample of public school children, to .71 in a pediatric-medical outpatient group. Test-retest data yielded correlation coefficients ranging from .72 to .84 in various samples (normals, diabetics, depressed) over time periods ranging from 4 to 13 weeks. In large samples of normal children, the CDI appears to function as a unidimensional scale. In psychiatric-clinic-referred children, the CDI's factor structure is more diverse and multidimensional (Clarizio, 1984).

Validity: Concurrent validity studies show that children who score high on the CDI also tend to have high levels of anxiety ($r = .65$) and low self-esteem ($r = -.59$), two

phenomena that are theoretically and clinically related to depression. Also, unpopular children have significantly higher levels of self-rated depression than have their popular peers (Vosk, Forehand, Parker, & Richard, 1982). The CDI differentiates diagnostic categories (i.e., children with major depression score higher than youngsters with other nondepressive psychiatric conditions). This scale does not, however, differentiate less severe forms of depression from psychiatric conditions that are not in the depressive domains. Data on internal consistency of the items (for clinic and nonclinic samples) and inter-item and item-total score correlates yielded significant correlations in the moderate range. The CDI has been found to correlate moderately with global depression ratings based on interviews with children (Kovacs & Beck, 1977).

The Revised Children's Manifest Anxiety Scale (RCMAS)

The RCMAS (Reynolds & Richmond, 1985), is a revised form of the Castaneda, McCandless & Palermo (1956) Children's Manifest Anxiety Scale. It is a 37-item self-report instrument designed to measure the level and nature of anxiety in children aged 6 to 19. RCMAS readability is at the grade one-to-two level. Children merely circle "yes" or "no" to each statement on the inventory. If they have difficulty either reading or circling responses, the examiner may assist. RCMAS provides four subscale scores in addition to a Total Anxiety Score: I. Physiological Anxiety; II. Worry and Oversensitivity; III. Social Concerns and Concentration; IV. Lie. Total Anxiety Score will be used in this study.

Normative data for the RCMAS was obtained in random classrooms of school age children (N = 329) from small urban communities in the southeastern United States.

Researchers were unable to gather SES. Experienced raters (clinicians and teachers) reviewed the CMAS and included additional items for possible consideration in the revision. All items were cross-validated on a second sample of students ($\underline{N}$ = 167). A total of 28 subscale items and 9 Lie items yielded a KR20 reliability estimate of .83 for the Total Anxiety score with the item-selection sample. This estimate of reliability is within the upper range of estimates on internal consistency for personality questionnaires for children (Reynolds & Richmond, 1985, p. 17).

The RCMAS was standardized on 4,972 children aged 6-19 from 13 states. The sample included 2,208 white males; 2,176 white females; 289 African American males, and 229 African American females. SES composition was reported to be representative. Special populations (retarded, learning disabled, intellectually gifted) were included in the standardization sample.

Reliability: Internal consistency estimates for the Total Anxiety Score (KR20 for alpha with dichotomous items) were .83 and .85 (test development sample, $\underline{N}$ = 329; cross-validation sample, $\underline{N}$ = 167). Reynolds and Richmond (1985) report an internal consistency (KR20) reliability of .85. Coefficient alpha reliabilities for all ages, sex and ethnicity were at or above .78. Reliability coefficients for African American females at ages 6, 8, 10,and 11 were significantly lower (.80) than for white females at those ages.

Reliability reports are less extensive for the four anxiety subscales. Using data from the national standardization sample, Physiological Anxiety subscale alpha reliability estimates are consistently in the .60s and .70s except at ages above 15 where they are lower. Worry/Oversensitivity subscale reliability estimates range mostly in the .70s and .80s. Social Concerns/Concentration subscale estimates (alpha) are in the .60s. The

reliability estimates for the Lie scale are in the .70 range and higher. Reliability estimates (KR20) on the Lie scale with African American children done in a single (N = 73) study (Argulewicz, cited in Reynolds and Richmond, 1985, p. 28) are poor (.36). Evidence for test-retest reliability is limited to the Total Anxiety score and the Lie subscale. Reynolds (1981) reported test-retest reliability coefficients of .68 for the Total Anxiety score on a sample (N = 534) of below grade 7 school children tested after a 9 month interval. Lie subscale score correlation using this same group was .58.

Validity: Construct validity of the RCMAS through factor analysis was demonstrated in the standardization sample by Reynolds and Paget (1981). After iterations were performed, extracted factors were rotated othogonally through the varimax procedure. Although Cattell (1978) advocates the use of factor loadings of +/-.10 to indicate salient variables, a more conservative value of +/-.25 was applied in this procedure. Results indicated that a large general anxiety factor (Ag) accounted for 52% of the common variance in the sample.

Convergent and divergent validity were examined by Reynolds (1980) using the State-Trait Anxiety Inventory for Children (STAIC; Spielberger, 1973). With a sample of 43 children, zero-order correlations between these scales indicated a strong correlation between the RCMAS and STAIC Trait scale (r = .85, p <.001); the RCMAS did not correlate significantly with the STAIC State scale. Construct validity of the RCMAS through factor analysis was demonstrated in the standardization sample by Reynolds and Paget (1981).

Self-Esteem Inventory (SEI)

The Self-Esteem Inventory (SEI) was designed by Coopersmith (1967) to measure school-age children's attitudes "toward the self in social, academic, family and personal areas of experience." The rationale for the instrument is that self-esteem is a personal judgment of one's own worthiness. The SEI has three forms: School Form (SEI-SchF) consisting of 58 items for use with children aged 8-15; Short School Form (SEI-SF) having 25 items for children aged 8-16; Adult Form (SEI-AF) used with persons over age 16. The SEI was rationally constructed by a panel of five psychologists and normative data was obtained with a sample of 1,748 public school children in Connecticut. The distribution of scores in this sample was skewed in the direction of high self-esteem.

The SEI can be individually or group administered and administration time rarely exceeds ten minutes. Although designed as a self-report measure, the SEI can be verbally administered to subjects who have difficulty reading the items. All SEI items are short statements (such as, "I'm a lot of fun to be with") and are answered "like me" or "unlike me." High scores on the SEI correspond to high self-esteem. Although sex differences were not significant in the normative sample, other researchers (Cowan, Altman, & Psysh, 1978; Kokenes, 1978) have reported that females perceive themselves to be less academically capable than males and display more conforming social behaviors than males on the SEI. The revised 25-item School Short Form (SEI-SF) for children aged 6-16 (Coopersmith, 1975) was selected for use in the present study because of its overall total score correlation (.86) with the original SEI-Form B (Coopersmith, 1967).

Reliability: Test-retest reliability coefficients obtained for the SEI-SchF (Coopersmith, 1967) after a three year interval with a sample from the normative group ($\underline{N}$ = 56) was .70. Internal consistency measured by Kuder-Richardson reliability estimates (KR20s) ranged from .81 to .92 using the SEI-SchF for subjects grades four through eight. These samples included students from all socioeconomic ranges and also included students with African American and Spanish-surnames. Reliability estimates exceeded the .60 minimum criteria for scientific research (Hudson, 1982). Data are insufficient for SEI-SF reliability, but it is likely that these coefficients would be lower due to the brevity of the instrument. However, KR20s using this form of the SEI on a college level sample (Bedian, Geagud, & Zmud, 1977) reported findings of .71 and .74 for female and male subjects, respectively.

Validity: Construct validity of the SEI has been demonstrated using significant sample sizes (Kimball, 1972; Kokenes, 1974, 1978). Concurrent validity studies using the SRA Achievement Series and an intelligence instrument (Simon & Simon, 1975) suggest a weak relationship between academic mastery and self-esteem. There was no strong evidence that intelligence and self-esteem are related.

Multiscore Depression Inventory (MDI)

The Multiscore Depression Inventory (MDI) is a 118-item inventory designed by Berndt (1986) which measures the severity of self-reported depression and depressive phenomena in normal, nonpatient adults and adolescents. The MDI has 10 subscales: (a) Low Energy Level, (b) Cognitive Difficulty, (c) Guilt, (d) Low Self Esteem, (e) Social Introversion, (f) Pessimism, (g) Irritability, (h) Sad Mood, (i) Instrumental Helplessness

and, (j) Learned Helplessness. An MDI Full Scale score indicates the severity of an individual's depression and its subscale scores assess general mood. The MDI was selected for use in the present study because it nonintrusively provides a global rating of self-reported depression in non-patient subjects. In addition to measuring severe depression, the instrument is particularly sensitive to less severe affective and dysthymic disorders.

The MDI was rationally and empirically developed from a pool of 961 statements written to describe various symptoms associated with depression in the literature: negative view of one's self, the world, and one's future. Two groups of independent raters were used to eliminate ambiguous and repetitive statements and to rank order items within the ten subscales. A 362-item version was then administered to 200 students at Loyola University in Chicago. Point-biserial correlations were computed for each item with its subscale. Items endorsed by less than five percent of the students in addition to those statements with item-total correlations of less than $r = .30$ were eliminated.

The present 118-item MDI consists of nine 12-item subscales and a tenth subscale (Guilt) with 10-items. Sixty-five items are keyed so that positive responses are indicative of depressive symptomology; fifty-three items are keyed negatively to imply an absence of depressive features in the respondent. Raw scores range between 0 to 118 with higher scores reflecting greater depression. The Full Scale MDI and each subscale have a T-score mean of 50 and a standard deviation of 10. T-scores between 40 and 50 are interpreted as "normal;" T-scores between 51 and 61 indicate "mild depression;" T-scores between 61 and 83 indicate "moderate depression;" and T-scores over 83 indicate "severe depression" (Berndt, 1986).

Normative data was gathered from a large sample (N = 883) of males and females which included gifted high school students (n = 248), college students (n = 463), and outpatients from family medical practices (n = 101). Berndt and Zinn (1984) and Pfaelzer-Smith (1985) subsequently developed score patterns for depressed, conduct disordered, mixed (depressed and conduct disordered), psychotic, suicidal, bulimic, anorexic, and chronic pain patients based on studies done with psychiatric inpatients using the MDI and structured diagnostic interviews notably: <u>Diagnostic Interview Schedule for Children</u> (Costello, Edelbrock, Kalas, Kessler, & Klaric, 1983); <u>Schedule for Affective Disorders and Schizophrenia</u> (Endicott & Spitzer, 1978); and the <u>Kiddie-SADS</u> (Puig-Antich & Chambers, 1983). Individuals in clinically depressed inpatient groups consistently reported MDI scores above 60T. They also manifested dysphoric affect, impaired cognitive processing and inhibited, dysfunctional behaviors.

The MDI can be individually or group administered in approximately 20 minutes. After directions are read by an examiner, respondents complete the instrument by filling in circles marked T (true) if an item <u>usually applies</u>, or F (false) if an item <u>does not usually apply</u>. MDI items are short, simple statements such as: "I often feel worn out" and "things usually seem to turn out well for me." Overall readability is at the sixth grade level. For the purposes of this study, MDI Full Scale scores greater than 61 will be used to define self-reported depression.

<u>Reliability:</u> Internal consistency estimates (coefficient alpha) based on data from the normative sample groups (N=883) were adequate with MDI Full Scale reliability coefficients at .96 or .97 across groups. MDI subscale reliability coefficients ranged from .71 (Learned Helplessness) to .91 (Low Energy Level) in each of the groups. Test-retest

reliability coefficients for the Full Scale MDI after a 3-week period with two samples from the normative group (n = 107; n =71) were excellent (r =.82). Reliability estimates for the MDI subscales exceeded .60 in both samples (range .68-.92) with the exception of the Instrumental Helplessness subscale (r =.38) reported in one of the samples (Berndt & Kaiser, 1980; Berndt, Petzel & Berndt, 1980).

Validity: Construct validity for the MDI has been demonstrated using data from the normative sample groups (Berndt & Kaiser, 1980; Berndt, Kaiser, & van Aalst, 1982; Berndt, Petzel, & Kaiser, 1983). Concurrent validity for the Full Scale MDI and the Beck Depression Inventory (r =.69) was initially reported by Berndt et al. (1980). Berndt, Berndt and Byars (1983) later used psychometric analyses to suggest that the MDI can be used to predict equivalent scores on the Beck Depression Inventory. Berndt, Zinn and Gilliam (1985) examined high correlations (r =.66) between the MDI and clinician's ratings of depression on the Hamilton Depression Rating Scale in an inpatient population. Convergent and discriminant validity, based on psychometric criteria used in the initial item selection process, have been reported by Berndt, Petzel and Berndt (1980). The MDI has been shown to adequately discriminate depressed groups reporting numerous stressful life events from depressed groups with fewer stressful life events (Berndt & Zinn, 1982). Studies have also shown the Full Scale MDI to successfully discriminate between inpatient groups diagnosed with DSM-III criteria (Berndt & Zinn, 1984).

State-Trait Anxiety Inventory (STAI)

The State-Trait Anxiety Inventory, Form Y, "Self-Evaluation Questionnaire," (STAI) is a 40-item self-report scale which was developed by Speilberger (1983a; 1983b) based on concepts of state and trait anxiety which were initially introduced by Cattell (Cattell, 1978; Cattell & Scheier, 1961,1963) to measure stable individual differences in an individual's perceptions of stressful situations (personality trait, or T-Anxiety) and the intensity of their state of anxiety reactions (emotional state, or S-Anxiety). The STAI has had extensive use in over 2,000 research studies over the past 15 years.

The STAI consists of two 20-item scales (S-Anxiety and T-Anxiety) which are self-administering and may be completed either individually or in groups in approximately 20 minutes when both forms are used. The T-Anxiety scale consists of items which assess how respondents "generally" feel while the S-anxiety scale assesses how respondents feel "at present". Readability for the scales is at the sixth-grade level. The S-Anxiety scale is always administered first, followed by the T-Anxiety scale when both scales are administered. The S-Anxiety scale is a 4-point Likert scale assessing the "intensity" of the respondent's feelings of anxiety to items on the STAI S-Anxiety scale (1 = not at all; 2 = somewhat; 3 = moderately so; or 4 = very much so). On the STAI T-Anxiety scale, respondents rate the "frequency" of their feelings of anxiety in a 4-point Likert scale format (1 = never; 2 = sometimes; 3 = often; 4 = almost never).

The STAI was developed from a pool of items with demonstrated concurrent validity as measures of anxiety beginning in 1964 by Spielberger & Gorsuch using college students (N=288). Subsequent test development procedures included psychometric analyses of test items and produced both STAI Forms A and B and an

eventual Form X which was published in 1970 (Spielberger, Gorush, & Lushene, 1970). Over 6,000 high school and college students, 600 neuropsychiatric and medical and surgical patients, and 200 prisoners were tested during the development, standardization and validation of Form X and earlier forms of the inventory. Revisions of Form X were carried out for the present form of the scale (Form Y) based on factor analyses and content analysis of the individual items of Form X with more than 5,000 subjects during the construction and standardization phase.

Normative data on Form Y was gathered from large samples of working adults (N = 1838), college students (N = 855), high school students (N = 422) and military recruits (N=1,964). Normative data on Form X was also collected for male neuropsychiatric patients and general medical and surgical patients. Forms X and Y are "highly correlated" (Spielbereger, 1983b, p. 2) and may be considered equivalent in assessing anxiety; however, Speilberger notes that Form Y should be employed in research and clinical applications requiring a differentiation between anxiety and depression (p. 10). STAI Form Y was selected for use in this study because of its broad use in research as a psychometrically sound, nonintrusive measure of anxiety. The STAI, moreover, has been used in research with medical patients (Alexander, 1972; Carr-Kaffashan & Woolfolk, 1979; Brooks & Richardson, 1980).

Reliability: Coefficients of stability for the STAI (Form X) T-Anxiety scale (1-hour, 20 days, and 104 days) with a sample college students ranged from .73 to .86 for males and .76 to .77 for females. Test-retest reliabilities in the same group for S-Anxiety ranged from .33 to .54 for males and from .16 to .31 for females reflecting the theoretical conceptualization of S-Anxiety as uniquely situational. Test-retest correlations for both

T-Anxiety and S-Anxiety with a subsample of male and female high school students (30-day and 60-day intervals) range from .68 to .71 for males on the T-Anxiety scale and from .65 to .75 for females. Measures of internal consistency for Form Y (KR-20; Cronbach, 1951) based on a subsample of 296 male and 481 female college students from the normative sample are excellent: T-Anxiety, $r = .90$ for males, and $r = .91$ for females; and, S-Anxiety, $r = .91$ for males and $r = .93$ for females. Overall median alpha correlations for the T-Anxiety and S-anxiety scales in the normative samples are .90 and .92 respectively. Correlations between STAI Form X and Form Y are high ranging between .96 to .98 ($N = 617$ college and high school students).

Validity: Construct validity of both T-Anxiety and S-Anxiety scales are high in contrasted groups. Mean T-Anxiety scores of neuropsychiaric patient groups (depressive reaction, anxiety reaction, schizophrenia, brain damage, character disorder; $N = 461$) have been compared with the mean T-Anxiety scores of normal subjects from the normative sample. The neuropsychiatric groups, with the exception of the character disorder subjects for whom the absence of anxiety is an inherent diagnostic criteria, had higher T-Anxiety scores. General medical and surgical patients with psychiatric complications evidence higher mean T-Anxiety scores than general medical and surgical patients without psychiatric complications. Construct validity for the S-Anxiety scale was observed for military recruits ($N = 1701$) tested on the second and third day of stressful basic training compared with mean S-Anxiety scale scores of college and high school students. As expected, the mean S-Anxiety scores for the military recruits were higher than the latter group. Additionally, the mean S-Anxiety scores of the recruits were

higher than their T-Anxiety scores in contrast to the relatively similar mean T-Anxiety and S-Anxiety scores of the students.

Concurrent validity of the STAI has been demonstrated by correlations with the IPAT Anxiety Scale and the Taylor Manifest Anxiety Scale, $r = .85$ and .73 respectively (Spielberger, 1983b). Studies of convergent and divergent validity of the STAI as reported by Spielberger indicate the instrument is positively correlated with other measures of emotional disturbance; conversely correlations with measures of unrelated constructs are low. Correlations of Form X subscales with the MMPI in inpatient neuopsychiatric populations indicate that T-Anxiety subscales and mean MMPI scores are comparable, but that S-Anxiety subscales may be significantly skewed by the degree of patient psychopathology.

Spielberger found the Cornell Medical Index to correlate (.70) with the STAI, but the STAI did not correlate with the U.S. Army Beta Test of intelligence indicating that a large number of medical symptoms are associated with overall high STAI scores and that the STAI is unrelated to measures of intelligence. Mean T-Anxiety and S-Anxiety scores of college students seeking counseling for emotional problems at the Florida State University Counseling Center were significantly higher than mean scores of students at the Center seeking counseling for educational or vocational problems. Correlations between T-Anxiety and S-Anxiety subscales (Form X) with statewide achievement test scores in entering freshman at Florida University were essentially zero.

Conners' Parent Rating Scale (CPRS-48)

The Conners' Parent Rating Scales (CPRS-39; Conners, 1970; CPRS-48; Conners, 1990) are widely used multidimensional behavioral observation instruments developed for clinical and research purposes to characterize patterns of behavior in children ages 3 to 17. Initial scales were developed informally by staff clinicians at Johns Hopkins University more than thirty years ago for use with parents and/or teachers in order to describe children's behaviors during clinical trials of various drugs. The Conners' Teacher Rating Scale (CTRS-39) was an initial 39-item rating scale published by Conners (1970) which was subsequently condensed into an alternative, shorter 28-item form by Goyette, Conners, and Ulrich (1978).

Conners (1970) also published an initial 93-item version of the Conners Parent Rating Scale (CPRS-93) in 1970 which was developed with a normative sample of 683 children between the ages of 6 and 14. A shorter, revised Conners Parent Rating Scale with 48-items (CPRS-48), derived from the original Conners Parent Rating Scale (CPRS-93), was developed by Goyette, Conners, and Ulrich (1978). Conners (1990) recommends the use of the revised instruments (CTRS-28; CPRS-48) which include "only items which were the most useful from the longer versions, and ... reword [ing of] certain items in order to combine related behaviors" (Conners, 1990, p. 3). The CPRS-48 was selected for use in this study since the instrument has sound psychometric properties and provides a measurement of parental perceptions on children's overall emotional-behavioral functioning in an efficient manner.

Normative data for the CPRS-48 has been reported by Goyette, Conners, and Ulrich (1978) for a sample of 578 children. Data was split by gender and age (ages: 3-5;

6-8; 9-11; 12-14; 15-17) to permit interpretation of developmental trends. The CPRS-48 includes five scales: (a) Conduct Problem, (b) Learning Problem, (c) Psychosomatic, (d) Impulsive-Hyperactive, (e) Anxiety. The CPRS-48 also contains an additional Hyperactivity Index. The CPRS-48 is self-administered by the parent who circles Likert-scale coded statements (0 = not at all; 1 = just a little; 2 = pretty much; 3 = very much) reflecting problems they observe in their child. High scores indicate adjustment problems in each of the five scale areas. The use of standard $\underline{T}$-scores on the instrument allows comparison of scale scores and adjustment for differences in gender and/or age groups. Conners (1990) has provided guidelines for interpreting CPRS-48 $\underline{T}$-scores (p. 27).

Reliability: Although there have been few published stability data on the CPRS-48 to date, Conners (1990) notes that its factorial stability appears stable over time (p. 38). However, test-retest reliability estimates for the initial Conners' Parent Rating Scale (CPRS-93) after a one year interval have been reported by Glow, Glow, and Rump (1982). Coefficients of stability ranged from .40 (Psychosomatic Scale) to .70 (Hyperactive-Impulsive Scale). Inter-rater reliability for the CPRS-48 using product moment correlations between mothers' and fathers' ratings of children's functioning range from .46 to .57 with a mean correlation of .51. Sandberg, Wieselberg, and Shaffer (1980) measured the internal consistency of the Hyperactivity Index as .92 when corrected for length. Item-total measures of internal consistency have also been reported by Goyette et al. (1978) ranging from .13 to .44 on the 48 test items.

Validity: Construct validity of the original CPRS-93 was examined by Campbell and Steinert (1978) using the Quay and Peterson's scales of the Behavior Problems

Checklist (Quay-Peterson Conduct Problem scale; Quay-Peterson Personality Problem Scale) with clinic children ($\underline{N}$ = 35) and a normal control sample ($\underline{N}$ = 45). Within the normal control sample of children, the Quay and Peterson Conduct Problem scale significantly correlated beyond the .05 level with the Conners' Conduct Problem scale (.50), Anxiety scale (.35), Hyperactivity scale (.53), and the Learning Problem scale (.42). The Quay-Peterson Personality Problem scale correlated with the Conners' Hyperactivity scale (.48) and the Quay-Peterson Inadequacy-Immaturity scale correlated with the Conners' Conduct Problem scale (.39) and Learning Problem scale (.56).

Within the clinic sample of children, the Quay and Peterson scales were also significantly correlated beyond the .05 level. The Quay-Peterson Conduct Problem scale correlated with the Conners' Conduct Problem scale (.75), Hyperactivity scale (.82) and the Learning Problem scale (64). Quay-Peterson Personality Problem scale correlated with the Conners' Anxiety (.56). The Quay-Peterson Inadequacy-Immaturity scale correlated with the Conners' Anxiety scale (59) and the Psychosomatic scale (34).

Factor analysis of parent ratings ($\underline{N}$ = 518 mothers; $\underline{N}$ = 373 fathers) of children ($\underline{N}$=383) on the CPRS-48 were analyzed using principal components factors (Goyette et al., 1978). An examination of the five orthogonal factors (scales) demonstrates that factor loadings for maternal responses were well above the .30 level recommended by Tabatchnick and Fidell (1983). Correlations among three CPRS-48 factors and the Hyperactivity Index are high: .66 for the Conduct Problem Scale; .79 for the Learning Problem Scale; .81 for the Impulsive-Hyperactive Scale. Discriminant validity has been reported by Kuehne, Kehle, and McMahon (1987); Kazdin, Esveldt-Dawson and Loar (1983); and, Wynne and Brown (1984) based on the original CPRS-93. The Conners'

scales effectively discriminate between groups of attention deficit disordered, learning disabled and matched normal controls.

Family Environment Scale (FES)

The Family Environment Cohesiveness Scale:FES-C (Moos & Moos, 1974; Moos & Moos, 1986) is a 9-item inventory which is used for clinical and research purposes to describe and compare family social environments. The FES-C measures cohesiveness in family systems: "the degree of commitment, help, and support family members provide for one another" (p. 2). The instrument has three forms: Real Form (Form R) which measures the respondent's perceptions of the family's current levels of cohesiveness; Ideal Form (Form I) which measures the respondents conceptions of desired or "ideal" family cohesiveness; and, an Expected Form (Form E) which assesses a respondent's expectations for future environmental cohesiveness in the family environment.

The FES Cohesiveness Scale was rationally and empirically developed from items on structured interviews which were agreed upon by independent raters. Psychometric criteria (item intercorrelations, item-subscale correlations, and internal consistency analyses) were used to select the final 9-item form of the FES Cohesiveness Scale. Normative data on the FES Cohesiveness Scale was obtained on normal and distressed families ($\underline{N} = 1125$ and $\underline{N} = 500$, respectively). The subsample for normal families was drawn from all areas in the country and included multigenerational and minority (African American and Hispanic) families. The subsample of distressed families was drawn from several sources: families of alcohol abusers; families of psychiatric patients; and from

families with children in crisis or with delinquent children. When compared with normal families, distressed families score lower on the FES Cohesiveness Scale measuring family unity.

The FES-C can be administered to individuals from age eleven upward either individually or in a group setting in about 15-20 minutes. Readability is between the fifth-to-sixth grade level. The instrument may be self-administered or administered orally to respondents. Translations with adequate psychometric properties are available in several languages including Spanish. Respondents simply mark "T" or "F" beside statements which they perceive as "mostly true" or "mostly false" about their family's cohesiveness ("There is plenty of time and attention for everyone in our family.").

FES-C Form R was used in this study since it measures an individual's perceptions of the present state of a family's cohesiveness. The FES-C has been widely used as a research instrument with a variety of populations including: families of depressed and other psychiatric outpatients; families of medical patients; families of substance abusers; and, finally, with minority families (Bloom, 1982; Bromet, Ed, & May, 1984; Kosten, Novak, & Kleber, 1984; Waring & Russell, 1980). Although the FES-C scores of depressed outpatients reported by Bromet, Ed and May (1984) were not significantly different from the FES-C scores in the normative sample, depressed outpatients reporting more psychological symptoms had lower FES-Cohesion scores than nonpatient subjects. Substance users (alcohol) in residential treatment also reported less cohesion in their families when compared with the normative sample (Filstead, McElfresh, & Anderson, 1981).

Waring and Russell (1980) compared patients with etiologically obscure, chronic physical symptoms with nonpatient controls on the FES-C. Families of medical patients were perceived as significantly less cohesive on the FES-C scale than the nonpatient controls. In a study of women with advanced breast cancer reported by Bloom and Spiegel (1984), family unity as measured by the FES-C was related to a positive life outlook, but not with the respondent's degree of social functioning. The authors speculated that reduced social functioning was due to restrictions caused by the women's illness rather than by any social stigma due to the disease. In general, family environments characterized by commitment, help and supportiveness among family members are associated with more positive adjustment patterns and the ability to deal more successfully with stress (Moos, 1987; Moos & Moos, 1986).

Reliability: All reliability estimates for the FES Cohesiveness Scale, based on data from the test development sample (N = 285), exceed the criteria for research purposes of .60 (Hudson, 1982). Internal consistency estimates based on coefficient alpha for a sample of 1067 respondents was .78; coefficients of stability (test-retest) reliability estimates were also high. The coefficient of stability (a) after a 2-month interval for a sample of 47 was .86; (b) after a 4-month interval with a sample of 35 was .72; and, (c) after a 12-month interval was .63 with a sample of 241. Therefore, the FES Cohesiveness Scale was a stable index of items measuring the same dimensions: perceived degrees of commitment, support and help in a family.

Validity: Construct validity of the FES Cohesiveness Scale has been demonstrated in the standardization sample and through research studies. Sandler and Barrerra (1984) reported a positive relationship respondent's scores on the FES-Cohesiveness Scale and

socially supportive behaviors from family members. Swindle (1983) noted that FES-Cohesiveness was positively related to indices of perceived support from friends on the Pocidano-Heller indices of relational supportiveness. Concurrent validity for the FES-C and the Family Routines Inventory has been reported by Jensen, James, Boyce and Hartnett (1983): FES-C scores were highly correlated to observable family behaviors (mealtimes, sleeping patterns, etc.) which occur with predictable regularity in families. Discriminant validity of the FES-C was reported by Russell (1980) indicating little relationship between FES-C and a construct of cohesion measured by the Family Sculpture Test.

Demographic Questionnaire

This questionnaire was developed by the researcher to determine demographic characteristics of mother-child dyads. It included information about the child: age, race, sex, birth position, number of siblings, grade in school; and, information about the mother: age, race, educational level, years married or divorced, employment information, income level, medical status, length of illnesses (if any), and children's awareness or attitude toward the illness. Similar information about the father was requested on this self-administered questionnaire, but it was not used in this analysis. A copy of the questionnaire can be found in Appendix B.

Procedures

Procedures with Mothers

Mother-child dyads were interviewed separately at offices at the research sites where the mothers were receiving services. Mothers were interviewed in a group setting

at the sites from which their respective subject-sample groups were drawn. Informed Consent Forms (Appendix C) were distributed to each subject. Signed forms were collected. A copy was provided to each subject. Mothers completed the research instruments in a group setting according to the respective test protocol (self-report instruments) standardized directions which were read to them by an advanced-level graduate psychology student trained in administering the research instruments. A bilingual (Spanish/English) interpreter, and Spanish translation of the Consent Form and instruments were available for those who required them.

The instruments were administered in the following order: DQ, MDI, STAI, FES. Finally, the CPRS-48 was completed on which mothers were asked to rate the functioning of their oldest child between the age of 8-16. After completing all of the self-report questionnaires, mothers were asked to comment, if they chose to, about their participation in the study and about any future goals they had for themselves or their child (Appendix D). Anecdotal material was audiotaped and recorded in note form by the advanced-level graduate student. Any further questions were answered, mothers were thanked for their participation, and methods for obtaining feedback from the results of the study were re-stated. Appointments for child participation were made at this time.

Procedures with Children

Children were individually interviewed by this researcher in the same offices where their mothers were interviewed. After describing that the purpose of the study was to find out how children feel about themselves and how they are perceived by their mothers, the children were provided with an Assent Form to sign (Appendix E). A bilingual interpreter was available. The instruments were administered in the following

order after directions were read to the children: CDI, SEI, and RCMAS. After the inventories were completed, each child was asked to comment, if he or she chose to, about their participation in the study and any future goals they had for themselves or their mothers (Appendix F).

Anecdotal was audiotaped and simultaneously recorded in note form by this examiner. Any further questions children had were answered. Children were thanked for their participation. Methods for obtaining feedback from the results of the study were reviewed with them.

Procedures to Ensure Anonymity/Confidentiality for Participants

To ensure anonymity/confidentiality with all of the participants, no listing of nonparticipating, prospective-volunteers was retained. All personal identifiers were removed from the research protocols by this researcher and replaced with a random number participant-code before they were scored by a panel of advanced-level graduate students who were blind to sample selections and the purpose of this study. A Master Key of personal identifiers and their participant-code number was securely and confidentially maintained by this researcher until completion of the study when the Master Key was destroyed. Audiotaped material was similarly maintained and destroyed upon the completion of this study.

Treatment of the Data

The present study planned a priori hypotheses testing with alpha (the probability of Type I Error) set at .05 and beta (the probability of Type II Error) set at .20 as

suggested by Cohen (1988). Power (1 - beta), the probability of rejecting a false null hypothesis, was set at .80 on the basis of the initial research estimate of projected sample size of 23 participants for each group and for Effect Size (ES) for the a priori research hypotheses. Estimated power for detectable Effect Sizes given alpha was set at .05. Alpha for tests of statistical significance with the research questions was also set at .05. Since the purpose of the research questions was to provide descriptive data in order to generate future investigative research, power will be reported post hoc.

Hypotheses

The research design, statistics, and power to address the research hypotheses are reported as follows:

Hypothesis 1.0: Maternal level of depression will be predictive of children's self-reported emotional dysregulation as measured by: depression, anxiety, and negative self-esteem for: (a) community control group women; (b) women with an AIDS-diagnosis; and, (c) methadone-maintained women. In order to determine if the data support the hypothesis that there is a relationship between maternal level depression and children's self-reported (a) depression, (b) anxiety and (c) self-esteem for: (a) community control group mothers, (b) AIDS-diagnosed mothers, and (c) methadone-maintained mothers, the zero-order correlations will be interpreted for both for significance at the .05 level and for meaningfulness using Van Dalen's (1983) criteria:

Absolute Value of r LT .20 = non-meaningful relationship

Absolute Value of r GE .20 and LT .40 = low relationship

Absolute Value of r GE .40 and LT .70 = marked relationship

Absolute Value of r GE .70 = high relationship

In addition to Van Dalen's criteria for meaningfulness, estimations of power according to data analytic conventions (Cohen, 1988, p. 86; Lipsey, 1990, p. 56) on the basis of sample size and detectable Effect Size (ES) where the ES index is expressed in terms of r, the correlation coefficient, (small ES: r =.10; medium ES: r =.30; large ES: r =.50) indicate that the sample size would be sensitive to a large effect size only.

Hypothesis 2.0: AIDS-diagnosed mothers will report significantly greater levels of dysregulatory behaviors in their children when compared to children's ratings of by demographically similar control mothers. In a like manner, it was also hypothesized that methadone-maintained mothers would report significantly greater levels of dysregulatory behaviors in their children than the control group of demographically similar mothers. In order to determine if the results of the analysis of the data support the directional a priori hypothesis: (a) AIDS-diagnosed mothers will report significantly greater dysregulatory behaviors in their children than a control group sample of mothers; (b) methadone-maintained mothers will report significantly greater dysregulatory behaviors in their children than a control group of demographically similar mothers, a one-way MANOVA will be used to control for "experimentwise error rate" (i.e., making Type I and Type II experimentwise errors with multiple independent variables due to chance probabilities; Haase & Ellis, 1987).

Multivariate and univariate analyses will be used to address significant Pillais criterion beyond the .05 level (Tabachnick & Fidell, 1983). Discriminant function analysis, a multivariate multiple regression with a dichotomous criterion variable, will be used as a follow-up procedure for the MANOVA in order to evaluate the beta coefficients

(standardized disciminant function coefficients) and structure coefficients (canonical variate correlations) to further interpret: (a) interrelationships between mother's ratings of dysregulatory child behaviors; (b) relative contributions of any of the dysregulatory behaviors to the multivariate discrimination among the three groups of mothers; and, (c) the total contribution of any grouping variable to the linear composite of criterion variables (Haase & Ellis). A multivariate measure of strength of association for the Pillais criterion coefficient, the compliment of multiple R squared, will be computed and reported as suggested by Tabachnick & Fidell (p. 249).

Estimated power for a 3-group MANOVA and the discriminant function analysis according to Cohen's (1988) data analytic conventions for detectable Effect Size (ES) where f is the ES index for proportion of variance accounted for by the multiple R squared (small ES: $f = .02$; medium ES: $f = .15$; large ES: $f = .35$) and estimated power for univariate analysis as recommended by Cohen (1988, p. 313) for the sample size and for detectable Effect Size (small ES: $f = .10$; medium ES: $f = .25$; large ES: $f = .40$) where f is defined as the standard deviation of standardized means indicated that the sample size would be sensitive to large effects only. Univariate F tests were planned for each of the Conners' Scale variables to determine which of these variables displayed significant group differences. Group differences among the child variables to be reported by means of ANOVA comparison techniques using a conservative Bonferroni approach as recommended by Bray and Maxwell (1985) to control for the overall alpha comparisonwise.

Hypothesis 3.0: There will be a significant, positive relationship between the length of time mothers of 8-16 year old children have been AIDS-diagnosed and the severity of the children's self-reported levels of a) depression, and b) anxiety. In order to determine if the results of the analysis support the a priori hypothesis, the investigator will use Spearman rho correlation coefficients and interpret the measured relationship on the basis of significance (.05) level and meaningfulness by means of Van Dalen's (1983) criteria. Estimations of power on the basis of sample size and for detectable ES where r is the population correlation coefficient (small ES: $r = .10$; medium ES: $r = .30$; large ES: $r = .50$) according to conventional guidelines (Cohen, 1988; Lipsey, 1990) indicated that the sample size would be sensitive to a large effect size only.

Hypothesis 4.0: It was further hypothesized that there would be a significant, inverse relationship between the length of time that a mother of an 8-16 year old child had been AIDS-diagnosed and a child's rating of his/her own self-esteem. In order to determine if the results of the analysis support the a priori hypothesis, the investigator will use Spearman rho correlation coefficient and interpret the measured relationship on the basis of significance (.05) level and meaningfulness by means of Van Dalen's (1983) criteria. Estimations of power on the basis of sample size and for detectable ES (small ES: $r = .10$; medium ES: $r = .30$; large ES: $r = .50$), according to conventional guidelines (Cohen, 1988; Lipsey, 1990), for a directional (one-tailed) test at the .05 level of significance indicate that the sample size would be sensitive to a large effect size only.

<u>Research Questions</u>

The research design and statistics to address the research questions are reported as follows:

<u>Research Question 1</u>: What are the levels of self-reported emotional dysregulation among children of AIDS-diagnosed mothers, children of methadone-maintained mothers and children of mothers in a demographically similar control group? In order to address the first research question, the investigator will examine and report measures of dispersion (frequency distributions, means, standard deviations, standard errors and range statistics) to describe the children's levels of self-reported depression, anxiety and self-esteem. The distributions of these traits will be examined in order that the levels of self-reported depression, anxiety and self-esteem in the AMC, MMC, and CMC groups of children be discussed so that future researchers can assess the nature of these traits in the three samples of children and compare the findings if the research is replicated.

<u>Research Question 2</u>: Are there significant differences in emotional dysregulation among the three groups of children? Emotional dysregulation is considered to be a multivariate trait; therefore, the investigator will use a MANOVA (Bray & Maxwell, 1982; Haase & Ellis, 1987) to determine if there is a significant multivariate difference among the three groups of children (AMC, MMC, CMC). According to Haase and Ellis (1987), the MANOVA guards against making "experimentwise" Type I and Type II errors, or "experimental pyramiding" (p. 404). Zero-order correlation coefficients among the criterion variables: depression (CDI); anxiety (RCMAS); and, self-esteem (SEI) will be examined to demonstrate whether these measures are correlated. In addition, Bartlett's

test of sphericity will be used to determine whether the correlations are large enough to ensure that the correlation matrix is not an identity matrix (Norusis, 1985).

Assuming there will be a significant multivariate difference among the three groups of children (AMC, MMC, CMC) on the basis of Pillais criterion being significant beyond the .05 level, discriminant function analysis (Bray & Maxwell, 1985; Tabatchnick & Fidell, 1983) will be used to locate and examine the dimensions along which the three groups are different. Beta coefficients and structure coefficients from the discriminant function analysis will be used to assess the relative contribution of the child dysregulatory measures (CDI, RCMAS, SEI) for discriminating among the three groups of children. Multivariate contrasts will be used to investigate differences among the classification and the criterion or dependent variables. A Bonferroni approach will be used to control experimentwise alpha (.05/6 for each contrast). A multivariate strength of association will be reported using the arithmetic mean of the squared canonical correlations, suggested by Cramer and Nicewater (1979), would be reported.

Research Question 3: What are the levels of self-reported depression and anxiety among AIDS-diagnosed mothers, methadone-maintained mothers and mothers in a demographically similar control group? Measures of dispersion (means, standard deviations, standard errors and range statistics) will be used to answer the third research question so that distributions of these characteristics in each of the three groups of mothers (AMG, MMG, CMG) can be better understood.

Research Question 4: Are there significant differences on self-reported depression and anxiety among the three groups of mothers? Zero-order correlation coefficients among measures of depression and anxiety (MDI, STAIS, STAIT) for mother's warrant the use of a MANOVA. Assuming that there is a significant multivariate difference among the three groups of mothers (AMG, MMG, CMG) on the basis of Pillais criterion being significant beyond the .05 level, the investigator will use a discriminant function analysis to examine the dimensions along which the three classification groups are different. Canonical analysis will be used to assess which of the discriminant functions contribute most to the group separation and to assess the proportion of variance shared between the grouping variables and the predictor variables.

Research Question 5: What are the relationships between the children's self-reports of their own emotional functioning and mother's estimates of children's overall functioning? Canonical analysis, a method for relating one group of variables to another different group of variables, will be used to describe the relationship between the variable set of the mother's estimates of their children's functioning (Conners' Scales) and the variable set of children's self-reported emotional functioning (CDI, RCMAS, SEI). The Pillais criterion will be followed by Rao's F test for the hypothesis of no linear association between the sets of variables.

The correlation between the linear combination of the mother's variable set (estimates of children's overall functioning) and the linear combination of the children's variable set (self-reported emotional functioning), the squared canonical correlation (R), will be used to describe the proportion of shared variance accounted for by the canonical

variates and, as suggested by Cohen and Cohen (1983 p. 492), will provide a measure of association between the variable sets. Proportion of variance extracted from each set of variables by the canonical variate of that set will also be reported. Interpretation of a given canonical variate will be done by means of structure coefficients (zero-order correlations of a variate with its constituent variables) as suggested by Cohen and Cohen (p. 456).

Research Question 6: What are the significant multivariate relationships between the statistically significant links between sets of maternal levels of: depression; state anxiety; trait anxiety; and children's levels of: depression; anxiety; and self-esteem? In order to address the sixth research question the investigator will use a canonical correlation analyses (Cohen & Cohen, 1983; Levine, 1977) to determine if there are subsets of linear composites of canonical variates between the measures for the mothers and their children. As Pedhazur (1982) recommends, only canonical correlations which account for a minimum of 10% of the shared variance will be interpreted. In this manner the investigator can determine if certain subsets of maternal and children's estimates of the child's emotional dysregulation are evident through "statistically significant patterns of linkage between the two sets" (Levine, 1977, p. 15).

Research Question 7: Is there a relationship, based on either mother's estimates of children's overall behavioral functioning or on children's self-reports, between the length of time mothers have been AIDS-diagnosed and emotional dysregulation in children? To address the research question the investigator will enter the three measures (children's

self-reported depression, anxiety, and self-esteem) into an intercorrelation matrix and interpret zero-order correlations for both significance (.05 level) and meaningfulness (Van Dalen, 1983). Since there is a possibility that the variable of "length of time elapsed" since a mother's AIDS-diagnosed status may be curvilinearly related to a child's self-reported levels of emotional dysregulation (depression, anxiety, self-esteem), the investigator will initially examine scatterplots to determine if there is any indication of a higher order trend between the temporal measure of "length of time elapsed" of maternal AIDS-diagnosed status and children's self-reported depression, anxiety and self-esteem. If a curvilinear trend is noted, the eta coefficient for nonlinear relationships (Downie & Heath, 1974) will be used, or the investigator will use regressions in which the predictor variable of "length of time elapsed" will be squared, cubed, etc., and entered into three regression equations in which the child's estimates of his/her depression, anxiety and self-esteem are regressed on the predictor variable of time using quadratic and, if necessary, higher trend levels (Pedhazur, 1982).

Research Question 8: Is there a relationship between "disclosure" versus "non-disclosure" of a mother's AIDS-diagnosed status to children and the child's own self-reported levels of depression, anxiety and self-esteem? Assuming that the children's self-report measures of depression, anxiety and self-esteem are correlated (zero-order correlations), a one-way MANOVA will be used to determine if there is a significant difference beyond the .05 level (Pillais criterion) for a linear combination of depression, anxiety and self-esteem between "disclosure/non-disclosure" children in the AMC group. Assuming Pillais criterion is significant beyond the .05 level, the investigator planned to

use t-tests to determine which significant difference of depression, anxiety and self-esteem between the "disclosure/nondisclosure" parent group are responsible for the significant multivariate statistic. Discriminant function analysis was also planned to determine how effective the emotional dysregulation measures (children's self-reported depression, anxiety and self-esteem) were for correctly discriminating between the two groups.

Research Question 9: Is there a relationship between an AIDS-diagnosed mother's perception of her family's supportiveness and self-reported emotional dysregulation in children? In order to address the research question, the investigator will measure zero-order correlations between the family's social climate as perceived by mothers and the emotional dysregulation variables (depression, anxiety, self-esteem) self-reported by the child. The null hypothesis of no significant differences will be tested at the .05 level using a one-tailed tailed (directional) test.

Chapter IV

RESULTS

This study predicted and compared relationships among: maternal levels of self-reported depression and anxiety; children's levels of self-reported depression, anxiety and self-esteem; demographic characteristics, current health status, and perceptions of family social supports with community sample control group women (CMG) and their children (CMC), a group of methadone-maintained women (MMG) and their children (MMC), and an AIDS-diagnosed group of women (AMG) and their children (AMC). The investigator also gathered anecdotal, or descriptive data, about the life experiences and life-perceptions of children who have an AIDS-diagnosed mother.

The results of the analyses are reported in this chapter in order to (a) describe the demographic data of the 50 mother-child subject pairs who participated in the study: a community sample control group of 24 mother-child dyads drawn from an urban community center (FEC); 12 methadone maintained mother-child dyads drawn from an urban drug counseling center (PCC); and, 14 AIDS-diagnosed mother-child dyads who were drawn from an urban medical center (SJH); (b) to determine if the results supported the four hypotheses; (c) to address the nine research questions; and finally, (d) to discuss anecdotal material gathered during the study.

Participants

There were 32 women who were volunteers for participation in the community sample group of mothers from the FEC site. Eight women did not meet the criteria for inclusion in the study. Five were excluded due to their child's age (less than 8 or older than 16). Three were excluded because their child was residing in foster care and not with them at the time of the study. Twenty-four mother-child dyads completed the study from the FEC site.

Of the 19 women who were volunteers for the methadone-maintained mother's group at the PCC site, 4 women did not meet the criteria for inclusion into the study. One failed to meet the age criteria for participation by her child. Three potential participants were excluded because their children were not residing with them. Of the remaining 15 volunteers meeting the criteria for inclusion, 1 woman was dismissed by the PCC site staff because of active drug use; 1 woman "eloped," or vanished, from participating in all services at the PCC site without leaving any means of further contact; 1 woman voluntarily withdrew from the study due to health complications related to her pregnancy. Twelve mother-child dyads completed the study from the PCC site.

Seventeen AIDS-diagnosed mothers volunteered to participate in this study from the SJH site. Two women did not meet the criteria for inclusion since their children were younger than 8 years old. Of the remaining 15 women who were potential participants, one AIDS-diagnosed mother died due to complications related to the disease. Fourteen mother-child dyads from SJH site completed the study.

Demographic Data

Demographic data for the mothers

The sample of 50 mothers broken down by the three comparison groups (community control, methadone maintained, AIDS-diagnosed) were described in terms of their (a) ethnicity, (b) class according to socio-economic status, (c) marital status, (d) employment status, (e) obtained educational level, (f) mother's kind of work, (g) mother's therapy status, (h) yearly family income, (i) mother's length of time in therapy, (j) mother's reason for therapy, (k) mother's medical status, (l) mother's length of illness, and (m) mother's disclosure of illness to the child (Table 4).

The AIDS-diagnosed mother's group (AMG) and the methadone maintained mother's group (MMG), composed of African American, White, and Hispanic women, were representative of the urban community from which the samples were drawn (U.S. Census Bureau, 1990). The community sample group (CCG) was composed of African American and Hispanic women only. The mean age for AIDS-diagnosed women was 35; the mean age for methadone-maintained women was 30; and, the mean age for community-sample women was 34.

A greater proportion of the AIDS-diagnosed mothers and methadone-maintained mothers were unemployed while the majority of community-sample group mothers (83.3%) were employed. The community-sample mothers, as a consequence, had higher socioeconomic statuses on the basis of the Hollingshead Scale. The methadone-maintained group of mothers had the highest proportion of single parents.

Table 4

Demographic Data for Mothers by Site

Demographic Variable	Site					
	FEC $\underline{n}$ = 24		SJH $\underline{n}$ = 14		PCC $\underline{n}$ = 1	
Ethnicity	$\underline{n}$	%	$\underline{n}$	%	$\underline{n}$	%
African American	7	31.8	3	21.4	5	41.7
White	0	00.0	5	35.7	3	25.0
Hispanic	15	68.2	6	42.9	4	33.3
Hollingshead SES Scale	$\underline{n}$	%	$\underline{n}$	%	$\underline{n}$	%
Class 1	4	16.7	8	57.1	10	83.3
Class 2	6	25.0	6	42.9	1	8.3
Class 3	5	20.8	0	00.0	1	8.3
Class 4	7	29.2	0	00.0	0	00.0
Class 5	2	8.3	0	00.0	0	00.0
Marital Status	$\underline{n}$	%	$\underline{n}$	%	$\underline{n}$	%
Married	6	25.0	3	21.4	1	8.3
Separated	5	20.8	3	21.4	0	00.0
Divorced	5	20.8	0	00.0	2	16.7
Living Together	1	4.2	4	28.6	3	25.0
Single	6	25.0	6	28.6	4	50.0
Employment Status	$\underline{n}$	%	$\underline{n}$	%	$\underline{n}$	%
Not Employed	4	16.7	11	78.6	11	91.7
Employed	20	83.3	3	21.4	1	8.3

Table 4 (continued).

<u>Demographic Variable</u>

	Site					
	FEC n = 24		SJH n = 14		PCC n = 12	
<u>Educational Level</u>	n	%	n	%	n	%
Less than 7th grade	0	00.0	1	7.1	0	00.0
Jr. High/ 9th grade	2	9.1	2	14.3	3	25.0
10th or 11th grade	3	13.6	7	50.0	4	33.3
H. S. Graduate	8	36.4	3	21.4	4	33.3
Partial College	3	13.6	0	00.0	1	8.3
College Degree	4	18.2	1	7.1	0	00.0
Graduate Degree	2	9.1	0.	00.0	0	00.0
<u>Kind of Work</u>	n	%	n	%	n	%
Not Employed	4	18.2	11	78.6	11	91.7
Unskilled	1	4.5	1	7.1	0	00.0
Semi-skilled	2	9.1	1	17.1	0	00.0
Small Business	2	9.1	1	7.1	0	00.0
Clerical	4	18.2	0	00.0	1	00.0
Semi-professional	9	40.9	0	00.0	0	00.0
<u>Yearly Income</u>	n	%	n	%	n	%
Under 10K	4	18.2	6	42.9	9	75.0
10 - 15K	8	36.4	4	28.6	1	8.3
15 - 20K	4	18.2	2	14.3	2	16.7
Over 20K	6	27.3	2	14.3	0	00.0

Table 4 (continued).

<u>Demographic Variable</u>

	Site					
	FEC n = 24		SJH n = 14		PCC n = 12	
<u>Therapy Status</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>
Not in therapy	18	75.0	4	28.6	7	58.3
In therapy	6	25.0	10	71.4	5	41.7
<u>Therapy Length of Time</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>
No therapy	18	75.0	4	28.6	7	58.3
Less than 6 months	2	8.3	1	7.1	2	16.7
6 - 12 months	3	12.5	3	21.4	1	8.3
Over 12 months	1	4.2	6	42.9	2	16.7
<u>Reason for Therapy</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>
No therapy	18	75.0	4	28.6	7	58.3
Parent/Child Issues	3	12.5	0	00.0	0	00.0
Detox counseling	3	12.5	5	35.7	0	00.0
Substance abuse	0	00.0	2	14.3	5	41.7
HIV/AIDS counseling	0	00.0	2	14.3	0	00.0
Other	0	00.0	1	7.1	0	00.0
<u>Mother's Medical Status</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>
None reported	13	81.2	0	00.0	3	25.0
AIDS	0	00.0	14	100.0	0	00.0
Methadone	0	00.0	0	00.0	9	75.0

Table 4 (continued).

<u>Demographic Variable</u>

	Site					
	FEC		SJH		PCC	
	n = 24		n = 14		n = 12	
	n	%	n	%	n	%
Other Specific Conditions	1	6.3	0	00.0	0	00.0
Unspecified Conditions	2	12.5	0	00.0	0	00.0
<u>Length of Illness</u>	n	%	n	%	n	%
None reported	13	81.2	0	00.0	12	100.0
Less than 6 months	1	6.3	1	7.1	0	00.0
6 - 12 month	0	00.0	2	14.3	0	00.0
Over 12 months	2	12.5	11	78.6	0	00.0
<u>Disclosure of Illness</u>	n	%	n	%	n	%
Disclosed to Child	8	72.7	10	71.4	7	58.3
Not Disclosed to Child	3	27.3	4	28.6	5	41.7

<u>Note.</u> Respondents did not always report information for all of the demographic variables. Also, some respondents identified themselves more than once for a category, i.e., "living together" and "single."

The community-sample group of mothers generally had achieved a higher level of education. Approximately 80% of these mothers had completed high school, and approximately 40% of these mothers had some post high school educational experiences. However, all levels of education were represented in the community-sample mothers

group. In examining kinds of work, the FEC group of mothers represented all categories of work experiences: 40.9% of these mothers were semiprofessional workers. Seventy-five percent of the methadone-maintained women, 42.9 % of the AIDS-diagnosed women, and 18.2% of the community sample women reported incomes of less than $10, 000 per year. The yearly incomes of the community-sample mothers were generally higher reflecting educational and work statuses.

The greatest proportion of mothers who were currently receiving therapy were in the AIDS-diagnosed mother's group, 71.4%; 41.7% of the methadone maintenance participants were in therapy; 25% of the community-sample mother's group were currently receiving therapy. A greater proportion of the AIDS-diagnosed mothers had been receiving therapy for 12 months or longer 42.9%, and an additional 21.4% of the AIDS-diagnosed sample had been in therapy from 6-12 months. Interestingly, the AIDS-diagnosed mother's group reported their primary medical status as "HIV" or "AIDS." Seventy-five percent of the methadone-maintained mothers reported methadone maintenance ("methadone") as their medical status.

Demographic data for the children

Data from 29 boys and 21 girls were used in the analysis (58.0 % were boys and 42.0% were girls). The mean age for children with AIDS-diagnosed mothers was 12 years old. The mean age for children with methadone-maintained mothers and for children with mothers from the community-sample group was 11 years old. The frequencies of the boys and girls by site are reported in Table 5. A complete composite of the children in the sample by grade is presented in Table 6.

Table 5

Demographic Data for Children by Site

Demographic Variable	Site					
	FEC $n = 24$		SJH $n = 14$		PCC $n = 12$	
Sex	$\underline{n}$	%	$\underline{n}$	%	$\underline{n}$	%
Male	17	70.8	6	42.9	6	50.0
Female	7	29.2	8	57.1	6	50.0
Ethnicity						
African American	8	33.3	4	28.6	5	41.7
White	0	00.0	5	35.7	3	25.0
Hispanic	16	66.7	5	35.7	4	33.3
Number of Siblings		%		%	-	%
0	-	20.8		33.3	-	35.7
1	-	37.5		8.3	-	35.7
2	-	25.0		25.0	-	14.3
3	-	4.2		8.3	-	0.0
4	-	12.5		16.7	-	14.3
6	-	0.0		8.3	-	0.0
Grade Category	$\underline{n}$		$\underline{n}$		$\underline{n}$	
Elementary	12	52.2	5	35.7	7	58.3
Middle	11	47.8	4	28.6	5	41.7
High School	0	00.0	5	35.7	0	00.0

Table 6

Children in the Sample by Grade

	Site					
	FEC $\underline{n}$ = 23		SJH $\underline{n}$ = 14		PCC $\underline{n}$ = 12	
Variable						
Grade Level	$\underline{n}$	$\underline{\%}$	$\underline{n}$	$\underline{\%}$	$\underline{n}$	$\underline{\%}$
1	0	00.0	2	14.3	0	00.0
2	2	8.7	0	00.0	2	16.7
3	3	13.0	2	14.3	3	25.0
4	3	13.0	1	7.1	1	8.3
5	4	17.4	0	00.0	1	8.3
6	7	30.4	1	7.1	2	16.7
7	4	17.4	2	14.3	2	16.7
8	0	00.0	1	7.1	1	8.3
9	0	00.0	1	7.1	0	00.0
10	0	00.0	2	14.3	0	00.0
11	0	00.0	2	14.3	0	00.0

Seventeen African American children (34.0%), 8 White children (16.0%), and 25 Hispanic (50.0%) children participated in the study. Seventy-one percent of the children with AIDS-diagnosed mothers; 58% of the children from the community sample group; and, 42% of the children from the methadone-maintained group had one other sibling or were the "only child" in their families. Finally, 46.9% ($\underline{n}$ = 23) were elementary level students (grade 1 through grade 5); 24.5 % ($\underline{n}$ =12) of the participants were middle grade students (grade 6 through grade 9); 28.6 % ($\underline{n}$ =14) of the children were enrolled in high

school (grade 9 through grade 12). These participants, therefore, comprised the entire range of grade levels for the 8-16 years old group.

Hypotheses

Hypothesis 1.0: Maternal level of depression will be predictive of children's self-reported emotional dysregulation as measured by: depression, anxiety, and negative self-esteem for: (a) control group women; (b) women with an AIDS-diagnosis; and, (c) methadone-maintained women.

According to Tabachnik and Fidell (1983) " a z value in excess of +/- 2.58 would lead to the rejection of the assumption of normality," (p. 79). Therefore, in order to ensure that the measures used in each analysis met the above criteria and had sufficient variability for using correlations, the means, standard deviations, test ranges, observed data ranges, skewness, and the standard error of skew are reported for each of the variables used in the analyses. Descriptive statistics of the variables for each group are shown in Table 7. A review of the data determined that the assumptions of normality were evident in that the z scores for skewness were well below the criteria set by Tabachnick and Fidell. An examination of the SD's of the data demonstrated that there were sufficient variation to use correlation statistics.

The correlation coefficients between maternal levels of depression (MDI) and the child depression level (CDI), the child anxiety level (RCMAS), and the child self-esteem level (SEI) for: (a) the community sample (FEC), (b) the methadone maintained women (PCC); and (c) the AIDS-diagnosed women (SJH) are reported in Table 8. The only

Table 7

Descriptive Statistics for Maternal Depression, Children's Depression, Children's Anxiety and Children's Self-Esteem by Site

Variable	Mean	SD	Test Ranges	Observed Min/Max	Skew	Standard Error of Skew
FEC						
MDI	49.50	10.13	35/81	38/75	1.050	.472
CDI	52.92	10.77	34/100	37/71	.324	.472
RCMAS	48.79	12.10	24/87	31/74	.623	.472
SEI	59.50	24.61	0/100	12/96	-.310	.472
PCC						
MDI	55.17	9.76	35/81	43/72	.489	.637
CDI	47.50	7.86	34/100	34/61	-.078	.637
RCMAS	55.08	9.85	24/87	40/74	.303	.637
SEI	54.50	17.79	0/100	36/88	.637	.637
SJH						
MDI	58.57	12.61	35/81	38/78	.111	.597
CDI	48.43	8.64	34/100	37/64	.636	.597
RCMAS	55.14	9.62	24/87	29/69	-1.387	.597
SEI	59.43	16.29	0/100	28/84	-.461	.597

Table 8

Zero Order Correlations between Maternal Level of Depression with Children's
Level of Depression, Anxiety and Self-esteem by Site

Maternal Level of Depression			Children's Dysregulation Level		
			CDI	RCMAS	SEI
Total participants	N = 50	MDI	.07	.12	-.22
FEC	n = 24	MDI	-.00	.16	.22
PCC	n = 12	MDI	.60*	-.36	-.21
SJH	n = 14	MDI	.24	.07	-.41

* $p < .05$

significant zero-order correlation between the maternal depression and the level of
childhood reported depression was found for the 12 children in the PCC group, r (10) =
.60, $p < .05$. Therefore, the hypothesis was partially supported in that there was a marked
relationship between the mother's level of depression with the child's level of depression
for the PCC group.

Interestingly, the mother's level of depression and the child's level of depression
in the total sample and the community sample group were essentially zero. (See Table
8.) No significant relationships were found between maternal reported levels of
depression and the child's reported levels of anxiety and self-esteem for any of the
groups. However, the correlations were in the expected directions between mother's

depression with lowered self-esteem in the AIDS-diagnosed and the methadone-maintained groups and between maternal depression and the RCMAS in the methadone-maintained group.

Hypothesis 2.0: AIDS-diagnosed mothers will report significantly greater levels of dysregulatory behaviors in their children when compared to children's ratings by community control group mothers. In a like manner, it was also hypothesized that methadone-maintained mothers would report significantly greater levels of dysregulatory behaviors in their children than the control group of demographically similar mothers.

The descriptive statistics for the dysfunctional scores of children on the Conners' Parent Rating Scales (CPRANX = anxiety scale, CPRCP = conduct problems scale, CPRHIND = hyperactivity index, CPRIH = impulsivity-hyperactivity scale, CPRLP = learning problems scale, CPRPS = psychosomatic problems scale) reported by the mothers are broken down by group and reported in Table 9. In order to determine if the results of the analysis supported the second hypothesis the investigator used a one-way MANOVA to compare the CMG, MMG, and AMG groups on a linear composite of the dysfunctional childhood reported behaviors on the 6 Conners' Scales: Hyperactivity Index (CPRHIND); Psychosomatic Problems (CPRPS); Learning Problems (CPRLP); Impulsive/Hyperactivity Scale (CPRIH); Conduct Problems (CPRCP); Anxiety (CPRANX).

Table 9

Descriptive Statistics for the Conners' Rating Scale by Mother's Group.

	M	SD	Test Ranges	Observed Min/Max	Skew	Standard Error of Skew
AIDS-diagnosed Mothers Group						
CPRHIND	62.85	12.23	34/100	39/81	-.475	.597
CPRPS	62.29	13.85	34/100	42/89	.158	.597
CPRLP	60.21	18.28	34/100	35/97	.459	.597
CPRIH	59.50	17.25	34/100	38/96	1.021	.597
CPRCP	58.57	15.96	34/100	39/84	.398	.597
CPRANX	53.21	9.52	34/100	34/69	-.004	.597
Methadone-maintained Mothers Group						
CPRHIND	51.42	10.99	34/100	39/82	2.080	.597
CPRPS	59.92	11.63	34/100	43/80	.072	.597
CPRIH	59.17	14.25	34/100	41/97	1.740	.597
CPRLP	62.75	9.70	34/100	43/79	-.493	.597
CPRCP	57.50	16.11	34/100	41/97	1.531	.597
CPRANX	55.50	8.05	34/100	44/68	.190	.597
Community Mothers Group						
CPRHIND	62.33	19.57	34/100	35/91	.122	.472
CPRPS	58.58	17.59	34/100	41/99	1.154	.472
CPRIH	66.54	17.58	34/100	40/99	.049	.472
CPRLP	64.58	16.55	34/100	43/99	.513	.472
CPRCP	59.96	17.84	34/100	36/99	.581	.472
CPRANX	59.21	11.16	34/100	41/99	.430	.472

Since there was no point in using a multivariate analysis, according to Bray and Maxwell (1985) if the dependent variables are orthogonal (non-correlated), the investigator reported the correlations among the Conners' scales (Table 10) as well as Bartlett's test of sphericity to a) demonstrate there were correlations among the 6 dysregulatory behavior ratings, and b) the correlation matrix was not an identity matrix.

Table 10

Zero Order Correlations Among the Mother's Reported Dysregulatory Behaviors of Their Children

	CPRANX	CPRCP	CPRHID	CPRIH	CPRLP	CPRPS
CPRANX	1.00	.27	.44**	.35*	.48**	.20
CPRCP	.27	1.00	.77**	.59**	.57**	.22
CPRHIND	.44**	.77**	1.00	.78**	.81**	.35*
CPRIH	.35	.59	.78	1.00	.52**	.14
CPRLP	.48	.57	.81	.52	1.00	.35*
CPRPS	.20	.22	.35	.14	.35	1.00

$*p < .05$, $**p < .001$

The greater proportion of correlations among the dysfunctional behaviors on the Conners' Scales, i.e., mother's perceived dysregulatory behaviors in the children, were generally markedly or highly correlated as well as being significant beyond the .05 level.

The markedly significant correlations among the Conners' Scales along with Bartlett's test of sphericity was equal to 158.67, 15 df, $p < .001$ indicating that the correlation matrix among the Conners' dysfunctional scales was not an identity matrix, pointing to the use of a MANOVA to avoid making a Type I error, i.e., reporting significance due to making numerous univariate comparisons. Therefore, the use of a multivariate analysis was appropriate.

There was no significant multivariate difference among the three groups of mother-child dyads (FEC/CMG, PCC/MMG, SJH/AMG) beyond the .05 level. The Pillais criterion, recommended by Tabachnick and Fidell (p. 249) for samples with unequal n's, equaled .32, approx. $F (12, 86) = 1.36$, $p = .20$. Therefore the results of the analysis did not support the second hypothesis. The null hypothesis of no significant multivariate difference among the three subsample groups was not rejected. Follow-up univariate differences were not reported as the use of the multivariate analysis was to limit the probability of a Type I error.

Hypothesis 3.0: There will be a significant, positive relationship between the length of time mothers of 8-16 year old children have been AIDS-diagnosed and the severity of the children's self-reported levels of a) depression, and b) anxiety.

In order to determine if the results of the analysis supported the a priori hypothesis, the investigator used Pearson product-moment correlation coefficients and interpreted the measured relationships on the basis of significance (.05) level and meaningfulness by means of Van Dalen's (1983) criteria. Since these were directional hypotheses, one-tailed levels of significance were used to reject the null hypotheses. Van

Dalen defined correlations below .20 as nonmeaningful, correlations greater or equal to .20 and less than .40 as low relationships, correlations equal to or greater than .40 and less then .70 as marked relationships, and correlations greater or equal to .70 as high relationships.

The correlations between the AIDS-diagnosed mother's length of illness (MOTH LOI) with the children's CDI reported depression, r (12) = .31, p = .14 and level of anxiety on the basis of the RCMAS, r (12) = .08, p = .40 were nonsignificant, low and nonmeaningful correlations, respectively. Therefore the results of the analysis did not support the hypothesis that children's reported depression and anxiety were significantly related to the AIDS-diagnosed mother's length of illness. The null hypothesis of no significant relationships between the mother's length of illness with measures of their children's self-reported depression and anxiety was not rejected.

Hypothesis 4.0: It is further hypothesized that there will be a significant, inverse relationship between the length of time that a mother of an 8-16 year old child has been AIDS-diagnosed and a child's rating of his/her own self-esteem.

There was a nonsignificant correlation between the AIDS-diagnosed mother's length of illness (MOTH LOI) with the child's self-reported self-esteem on the Coopersmith's Self-Esteem Inventory: r (12) = -.42, p = .07. Although the correlation between the AIDS-diagnosed mother's length of illness and the child's self-reported level of self-esteem was in the expected direction, low n in the study reduced the power of this analysis. The null hypothesis of no significant relationship between the AIDS-diagnosed mother's length of illness with the child's self-esteem was not rejected.

Research Questions

Research Question 1

What are the levels of self-reported emotional dysregulation among children of AIDS-diagnosed mothers, children of methadone-maintained mothers and children of mothers in a demographically similar control group? The descriptive statistics for the children's responses to the Children's Depression Inventory (CDI), Manifest Anxiety Scale (RCMAS), and the Coopersmith Self-Esteem Inventory (SEI) are presented in Table 7. CDI scores are reported as T-scores with a mean of 50 and a standard deviation of 10. T-scores of 65 or greater are considered clinically significant and stand at the 93rd percentile. Children in each of the groups in this study self-reported an "average" amount of depression compared to the CDI normative group of children. Interestingly, children with methadone-maintained mothers saw themselves as having the least amount of depressive feelings while children from the community control group saw themselves as having the most depression.

The RCMAS also has a mean of 50T and a standard deviation of 10. Each of the groups of children in this study (children with AIDS-diagnosed mothers, children of the community control group of mothers, and children with methadone-maintained mothers) reported having "average" levels of anxiety compared to the RMCAS normative sample group of children. Overall, the children from the community control group in this study reported experiencing the least amount of anxiety.

While there are no exact criteria for "high, medium," and "low self-esteem" for the SEI, mean scores typically range from 70 to 80 ($\underline{SD}$ = 11 - 13). In most studies using

the SEI, scores are negatively skewed in the direction of "high" self-esteem. General guidelines suggest that mean scores at or above 75 indicate "high" self-esteem. Therefore, all of the children in this study experienced "medium" levels of self-esteem in terms of evaluating their own self-worth. It had been anticipated that children with AIDS-diagnosed mothers would have lower mean self-esteem T-scores than the other two groups of children in the study. It was not at all expected that the self-esteem scores of children with AIDS-diagnosed mothers and children with methadone-maintained mothers would, in fact, be greater than the self-esteem scores of the children from the community sample group in this study.

Research Question 2

Are there significant differences in emotional dysregulation among the three groups of children? In order to determine if there was a significant multivariate difference among the three groups of children participants, the investigator used a multivariate analysis to avoid making a Type I error. As previously stated it was necessary to demonstrate that the correlations among the children's self-reported depression, manifest anxiety and self-esteem were significantly correlated.

The correlation between depression and manifest anxiety was significant beyond the .001 level, r (48) = .47, $p.$ < .001; the correlation between reported depression and self-esteem was significant beyond the .001 level, r (48) = -.56., p < .001. Finally, the correlation between manifest anxiety and reported self-esteem was significant beyond the .001 level, r (48) = -.57, p < .0001. The correlations were all highly significant and in the

expected direction as depression and anxiety were negatively correlated with self-esteem and positively correlated with one another.

Therefore, the multivariate analysis of variance comparing a linear composite of depression, anxiety, and self-esteem among the three groups of children (CMC, MMC, AMC) was used. There was a significant multivariate difference among the three groups of children, Pillais criteria = .300, approx. F (6, 92) = 2.70, p = .02. Since there was a significant MANOVA, the investigator used three one-way ANOVA's to determine which of the children's reported levels of depression, anxiety, and self-esteem was the cause of the significant multivariate effect.

The investigator had planned to make all pairwise comparisons by using a Scheffe a posteriori multiple comparison test to follow up significant F-ratios. The three one-way ANOVA's are presented in Table 11. There was no significant difference between the self-reported children's depression on the CDI between FEC, PCC and SJH participants, F (2, 47) = 1.48, p = .20.

Table 11

One - Way ANOVA as Follow-Up to MANOVA for Comparing Three Groups of Children on Self-Reported Dysregulatory Behaviors

Variable	Between SS	Within SS	Between MS	Within MS	F
CDI	412.32	6555.76	206.16	139.48	1.48
RCMAS	633.22	5576.30	316.61	118.64	2.67
SEI	162.29	22878.43	81.15	486.78	.17

There was no significant difference between the three manifest anxiety measures among the three groups beyond the .05 level, F (2, 47) =2.67, p = .08. Finally, there was no significant mean difference among the FEC, PCC and SJH participants on the measure of self-esteem, F (2, 47) = 0.17, p =. 85. Therefore, the post-hoc Scheffe comparisons were not made. Although there was a multivariate effect, the univariate F-ratios were not significant. The significant multivariate difference may have been due to a comparison of the community control sample group to the AIDS-diagnosed and methadone-maintained groups combined into one "at-risk" group.

Research Question 3

What are the levels of self-reported depression and anxiety among AIDS-diagnosed mothers, methadone-maintained mothers and mothers in a demographically similar control group? The descriptive statistics for the mothers' responses to the Multiscore Depression Inventory (MDI) are in Table 7. The means, standard deviations, test score ranges, observed score ranges, skewness and standard error of the skew for the sample with the State Anxiety Scale (STAIS) and the Trait Anxiety Index (STAIT) are reported in Table 12.

As a measure of self-reported depressive features such as low energy levels, cognitive difficulties, feelings of guilt, introversion, pessimism, sad mood, irritability and helplessness, the Full Scale Multiscore Depression Inventory (MDI) has a mean has a mean score of 50T with a standard deviation of 10. T-scores of less than 51 are normal reflecting no depression, or "minimal" depression. T-scores between 51 and 61 represent an individual's subjective impression of "mild" depression. T-scores between 61 and 83

Table 12

Descriptive Statistics for Mothers' Self-Reported Anxiety By Site

Variable	Mean	SD	Test Ranges	Observed Min/Max	Skew	Standard Error of Skew
FEC Site						
STAIS State Anxiety	52.83	11.78	35/90	37/43	.440	.472
STAIT Trait Anxiety	55.33	11.81	33/98	38/82	-.285	.472
PCC Site						
STAIS State Anxiety	55.25	13.05	35/90	37/75	.293	.637
STAIT Trait Anxiety	58.92	11.48	33/98	40/80	.185	.637
SJH Site						
STAIS State Anxiety	59.36	15.62	35/90	35/83	-.035	.597
STAIT Trait Anxiety	62.50	15.62	33/98	38/83	-.408	.597

indicate "moderate" depression while T-scores over 83 suggest the presence of "severe" depression. As expected from the literature positing a relationship between life-stressors and depression, AIDS-diagnosed women and methadone-maintained women reported that they experienced some "mild depression" in contrast to the community sample group of women who reported having only "minimal," or no depressive feelings.

The Self-Evaluation Questionnaire (STAI) consists of two anxiety-proneness scales, the STAIS and the STAIT, which measure subjective feelings of nervousness, worry, tension and apprehension. The STAIS scale assesses "State-anxiety" or how anxious an individual feels "right now." The STAIT scale measures "Trait-anxiety" or the degree of anxiety that an individual "generally feels." Scores for the STAIS and the STAIT may vary from a minimum of 20 to a maximum of 80.

State-anxiety scale (STAIS) scores are higher when an individual responds to the scale under stressful life conditions and lower when an individual responds to the scale under more neutral life circumstances. In contrast, Trait-anxiety scale (STAIT) scores are not generally influenced by day-to-day stressors (Spielberger, 1983, p. 5). Females in the STAI normative sample group in the two age bands (ages 19 to 39 and ages 40 to 49) that correspond to the age band of women in this present study obtained mean State-anxiety scale scores of 36.17 (SD = 10.96) and 36.03 (SD = 11.07), respectively. These same two age bands from normative sample group obtained mean Trait-anxiety scale scores of 36.15 (SD = 9.53) and 35.03 (SD = 9.31), respectively.

AIDS-diagnosed women and methadone-maintained women in the present study reported experiencing greater levels of both State-anxiety and Trait-anxiety compared with the subjects in the normative sample group. As anticipated, AIDS-diagnosed women described themselves as feeling both more situationally and chronically anxious than methadone-maintained women and women from the community sample group. Unexpectedly, women in the community sample group of mothers also reported experiencing mild levels of both State-anxiety and Trait-anxiety.

Research Question 4

Are there significant differences in self-reported depression and anxiety among the three groups of mothers? In order to determine if there was a significant multivariate difference among the three groups of mothers in the sample (CMG, MMG, AMG), the investigator used a multivariate analysis to avoid making a Type I error. As previously stated it was necessary to demonstrate that the correlations among the mothers' self-reported depression, S-anxiety, and T-anxiety index scores were significant. The correlation between self-reported depression and S-anxiety was significant beyond the .001 level, r (48) = .77, p. < .001. The correlation between self-reported depression and T-anxiety was significant beyond the .001 level, r (48) = .75, p. < .001. Finally, the correlation between S-anxiety and T-anxiety was also significant beyond the .001 level, r (48) = -.80, p < .001.

Bartlett's test of sphericity was significant beyond the .001 level, 86.4 with 3df. The correlations were all highly significant and in the expected direction as depression and both anxiety measures were significantly and highly correlated. Therefore, the multivariate analysis of variance comparing a linear composite of depression, state anxiety and trait anxiety among the three groups was done. There was no significant multivariate difference among the three groups of mothers (FEC, PCC, SJH) on a linear composite of the three dysregulatory behaviors (depression, state-anxiety, trait-anxiety) Pillais criteria = .128, approx. F (6, 92) = 1.05, p = .40. Since there was not a significant multivariate effect, follow-up univariate comparisons were not computed.

Research Question 5

What are the relationships between the children's self-reports of their own emotional functioning and mother's estimates of children's overall functioning? In order to address the fifth research question, the investigator reported and interpreted the zero order correlations among the children's self-reported functioning on the CDI, RCMAS, and SEI with maternal estimates of children's overall behaviors on the Conners' Scales (CPRANX, CPRCP, CPRHIND, CPRIH, CPRLP, CPRPS). These relationships were reported for all 50 participants, the 24 community sample mothers, the 12 methadone-maintained mothers and the 14 AIDS-diagnosed mothers in Table 13. There were no significant relationships beyond the .05 level between the children's self-reported functioning and the six parental estimates of children's functioning for the entire sample of 50 mother-child dyads, or the 24 mother-child-dyads from the FEC group.

There was one significant correlation between the methadone-maintained-mother's estimates of the child's anxiety on the Conners' Scale with the child's self-reported depression, $r(10) = .62$, $p < .05$. For the AIDS-diagnosed mothers group, there were significant-relationships between the mother's estimate of the child's hyperactivity (CPRHIND) and her estimate of the degree of the child's learning problems (CPRLP) with the child's self-reported depression, $r(10) = .71$, $p < .05$ and $r(10) = .61$, $p < .05$, respectively. There was also a significant inverse relationship between the mother's estimate of the child's hyperactive behaviors (CPRHIND) with the child's self-reported self-esteem (SEI) beyond the .05 level, $r(12) = -.68$, $p < .05$. Therefore, only significant relationships between the mother's estimates of dysregulatory behaviors of their children

Table 13

Zero Order Correlations Between Children's Self-Reports With Mother's Estimates of Children's Functioning on Conners' Scales

Mother's Estimates Of Children's Functioning	Total Sample N = 50			FEC n = 24			PCC n = 12			SJH n = 14		
	CDI	RCMAS	SEI	CDI	RCMAS	SEI	CDI	RCMAS	SEI	CDI	RCMAS	SEI
CPRANX	.10	-.12	-.13	-.14	-.10	-.04	.62*	.11	-.47	-.33	.00	-.20
CPRCP	.17	.13	-.11	.05	.22	-.05	.07	-.24	.03	.45	.34	-.44
CPRHIND	.30*	.10	-.17	.10	.25	-.12	.15*	-.13*	.22	.71**	.25	-.68*
CPRIH	.26	.07	-.16	.17	.23	-.16	.10*	-.22*	-.07	.48	.24	-.40
CPRLP	.22	.00	-.18	.04	.11	-.07	.01	-.42	-.03	.61*	.10	-.56
CPRPS	.03	-.04	-.16	-.13	-.18	-.10	.46	.18	-.07	.29	.13	-.42

*p < .05   **p < .01

Note: * = Spearman rho coefficient used.

with the children's self-reported levels of depression and anxiety were found for children who were in either the methadone-maintained mother's group or the AIDS-diagnosed mother's group. For the methadone-maintained group of mothers and children, the Spearman-rho correlation of the children's depression (CDI) with the Conners' hyperactivity scale (CPHIND) and hyperactivity index (CPHI) were not significant.

Research Question 6

What are the multivariate relationships between the statistically significant links between sets of maternal levels of: depression; state anxiety; trait anxiety; and children's levels of: depression; anxiety; and self-esteem? In order to address the sixth research question, the investigator reported measures of the children's scores and the parent's scores in 3 x 3 correlation matrices for: (a) the total sample of 50 participants; (b) the sample of 24 FEC respondents; (c) the sample of 12 PCC participants; and, (d) the sample of 14 SJH participants. Significant relationships beyond the .05 level were noted in each of the matrices.

There was a significant relationship for the total group of 50 mother-child dyads between children's anxiety (RCMAS), r (48) = .32, p .05, and children's self-esteem (SEI), r (48) = -.29, p .05, with the parents' reported Trait-anxiety (STAIT) beyond the .05 level. There was an inverse correlation between the maternal level of Trait-anxiety (STAIT) with the children's self-esteem (SEI) in the community sample (FEC) group of participants, r (10) = -.44, p .05. There was a significant relationship between the level of maternal depression (MDI) and children's reported depression (CDI) for the methadone-

maintained mother-child dyads (PCC group) beyond the .05 level, r (10) = 60, p .05. (Table 14). No other significant correlations were noted.

The criteria for including canonical correlations in the analysis were based on Pedhazur's (1982, p. 727), r_c^2 = .10 or rc = .32 in order to be meaningful. Therefore, only the first set of canonical variates were interpreted. (See Table 15). An examination of the standardized canonical variate coefficients and the structure coefficients, correlations between the variables and the first canonical set of variates, indicated that the relationships were essentially determined by the level of reported anxiety in the child with the measure of T-anxiety in the mother as the structure coefficients between the mother's T-anxiety with the first canonical variate was .47; in a like manner, the correlation between the first canonical variate for children was correlated at .92 with the children's level of anxiety.

The same conclusion was made by examining the standardized canonical coefficients. The standardized canonical coefficients for T-anxiety for mothers was 1.37; the standardized canonical coefficient of RCMAS for children was 1.25. Therefore levels of Trait-anxiety in mothers with levels of RCMAS anxiety in children was the cause of the significant four canonical correlations. Stable, or trait, anxiety levels in mothers appear to be associated with self-reported anxiety levels in children.

Research Question 7

Is there a relationship, based on either mother's estimates of children's overall behavioral functioning or on children's self-reports, between the length of time mothers

Table 14

<u>Relationships Between Maternal Levels of Depression, State Anxiety and Trait Anxiety</u>

<u>with Children's Level of Depression, Anxiety and Self-Esteem</u>

Children's self-report levels	Maternal self-reported levels		
	MDI	State Anxiety	Trait Anxiety
Total Sample			
$\underline{N}$ = 50			
CDI	.07	.08	.09
RCMAS	.12	.19	.32*
SEI	-.22	-.19	-.29*
FEC Sample			
$\underline{N}$ = 24			
CDI	-.00	-.13	-.04
RCMAS	.18	.20	.25
SEI	-.22	-.20	-.44*
PCC Sample			
$\underline{N}$ = 12			
CDI	.60*	.47	.56
RCMAS	-.36	.13	.24
SEI	-.21	.13	.24
SJH Sample			
$\underline{N}$ = 14			
CDI	.24	.44	.27
RCMAS	.06	.42	.43
SEI	-.41	-.51	-.48

*p < .05

Table 15

Canonical Correlation Analysis of Maternal Level of Self-Reported Behaviors and Children's Level of Self-Reported Dysregulation

Eigenvalues and Canonical Correlations

Root No.	Eigenvalue	Pct.	Cum. Pct.	$\underline{R}c$	$\underline{r}c^2$
1	.206	66.952	66.952	.413	.170
2	.099	32.313	99.265	.300	.090
3	.002	.735	100.000	.047	.002

Canonical Variate Statistics for Mother's Levels of Depression and Anxiety

	Raw Canonical Coefficients	Standardized Canonical Coefficients	Structure
MDI	-.12	-1.34	-.25
STAIS	.10	.10	.17
STAIT	-.01	1.37	.47

Canonical Variate Statistics for Children's Dysregulatory Levels of Behavior

	Raw Canonical Coefficients	Standardized Canonical Coefficients	Structure
CDI	-.02	-.22	.31
SEISSF	.02	.35	-.24
RCMAS	.11	1.25	.92

have been AIDS-diagnosed and emotional dysregulation in children? There were no significant correlations between the mother's length of illness (MLOI) with mother's estimates of children's overall behavioral functioning, or children's self-reported depression, anxiety and negative self-esteem. However, there were marked correlations in the expected directions between a mother's length-of-illness (MLOI) with the mother's estimate of the child's CPR HIND hyperactivity (r = .42), the mother's estimate of the child's CPR IH hyperactive/impulsive behaviors (r = .44) and the child's SEI reported level of self-esteem (r = -.42). (See Table 16).

Table 16

Zero Order Correlations Between Mother's Length of Illness with Maternal Estimates of Children's Functioning and Children's Self-Reported Depression, Anxiety and Self-Esteem

	Mother's Length of Illness
CPRANX	.34
CPRCP	-.02
CPRHIND	.42
CPRIH	.44
CPRLP	.15
CPRPS	.03
CDI	.31
RCMAS	.08
SEI	-.42

<u>Research Question 8</u>

Is there a relationship between "disclosure" versus "non-disclosure" of a mother's AIDS-diagnosed status to children and the child's own self-reported levels of depression, anxiety and self-esteem? On the basis of using both the t-tests and the Mann-Whitney U, which is recommended when sample sizes are unequal by Roscoe (1979) in "Fundamental Research Statistics for the Behavioral Sciences," there was no significant difference between children's reported levels of depression, anxiety and self-esteem on the basis of maternal disclosure (See Table 17).

Table 17

<u>Mother's Disclosure of AIDS Illness with Child's Level of Self-Reported Dysregulation</u>

Variable	Disclosed $\underline{n} = 10$		Not Disclosed $\underline{n} = 4$			
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	$\underline{t}$	$\underline{z}$
CDI	49.30	9.42	46.25	6.95	.58	.62
RCMAS	54.50	10.90	54.25	4.11	.57	.60
SEI	60.40	15.71	57.00	19.97	.78	.83

Research Question 9

Is there a relationship between an AIDS-diagnosed mother's perception of her family's supportiveness and self-reported emotional dysregulation in children? There was no significant relationship between the AIDS-diagnosed mother's self-reported family cohesiveness with the child's self-reported depression, r (12) = -.23, p = .43, the child's level of anxiety, r = (12), -.19 p = .51, and self-esteem, r (12) = .29, p = .32. Although the correlations were in the expected directions, none of these relationships were found to be non-chance.

Compared to the FES-C normative group (M = 50, SD = 10), the overall perception of support from family members and friends was "below average" for the three groups of women in this study: AIDS-diagnosed women (M = 43.43, SD = 17.85), methadone-maintained women (M = 46.08, SD = 15.93), and women from the community sample (M = 45.13, SD = 16.22). Families of substance users and families of individual's having chronic physical symptoms that are characterized by "moderate" or "high" family cohesiveness in terms of the FES are better able to manage life stressors (Moos & Moos, 1989). The women is this study reported less-family cohesiveness compared to a normative group subsample of respondents from ethnic minorities (N = 178) and a subsample of respondents from single-parent families (N = 81) in the normative group.

Chapter V

DISCUSSION

Re-statement of the Problem

Over the past decade the use of more intensive antiretroviral therapies has been able to slow the progression from AIDS to death for many people infected with HIV. Despite reductions in mortality, women -especially ethnic minority women and poor women- continue to be disproportionately affected by the AIDS epidemic (Pallela, 1998). As the number of children with AIDS-diagnosed mothers increases, understanding how these children function psychologically has acquired a new urgency for both researchers and mental health clinicians alike.

Summary of Quantitative and Research Question Findings

The present study was designed to investigate emotional dysregulation in children living with an AIDS-diagnosed parent by comparing three groups of children: children with AIDS-diagnosed mothers, children with methadone-maintained mothers, and children with mothers from a demographically similar control group. Its purpose was to describe the child's self-reported level of anxiety, depression, and self-esteem in the following ways: (a) in light of maternal levels of self-reported anxiety and depression; (b) in contrast to maternal perceptions of a child's overall functioning; (c) in relationship to the length of time of elapsed since the maternal AIDS-diagnosis; (d) with respect to the child being "aware" or "unaware" of the mother's AIDS status; and finally, (e) in terms of

AIDS-diagnosed mother's perceptions of her family social supports. Anecdotal material about the life experiences and life-perceptions of children with AIDS-diagnosed mothers was also gathered during this study.

The results of this study suggest that maternal levels of depression and anxiety, as measured by the Multiscore Depression Inventory (MDI) and the State-Trait Anxiety Index (STAIS/STAIT), respectively, are not significantly predictive of emotional dysregulation in children with an AIDS-diagnosed mother in terms of the child's self-reported levels of depression, anxiety and negative self-esteem. Moreover, there were no significant differences in self-reported depression, anxiety and self-esteem among children with AIDS-diagnosed mothers, children with methadone-maintained mothers, or children of mothers from the community sample group as measured by the Children's Depression Inventory (CDI), Revised Children's Manifest Anxiety Scale (RCMAS), and the Coopersmith Self-Esteem Inventory (SEI). No significant relationships were found between children's self-reported levels of emotional dysregulation as measured by the CDI, the RCMAS, and the SEI with mother's estimates of their children's overall functioning as measured by the Conners' Parent Rating Scales: conduct problems (CPRCP), learning problems (CPRLP); psychosomatic complaints (CPRPS); anxiety (CPRANX); hyperactivity (CPRHIND); impulsive/hyperactive behavior (CPRIH).

However, for children in the AIDS-diagnosed mothers group, this study found that there was a significant relationship between the child's self-reported depression (CDI) and a mother's ratings of her child's hyperactivity (CPRHIND) and learning problems (CPRLP). There was also significant relationship found between an AIDS-diagnosed mother's perception of her child's hyperactivity (CPRHIND) with the child's

self-esteem (SEI). For children in the methadone-maintained mothers group, a significant relationship was found between the child's self-reported depression (CDI) and a mother's estimates of her child's anxiety (CPRANX). No significant relationships were found between child's self-reported depression, anxiety and self-esteem with maternal estimates of the child's overall functioning in the community sample group of children and mothers.

There were no significant correlation between the mother's length of illness (MLOI) with the child's self-reported depression, anxiety, and negative self-esteem. In contrast to expectancies, there was also no significant difference between the child's level of emotional dysregulation with the child being "aware" or "unaware" of their mother's AIDS diagnosis. Finally, compared to the Family Environment Scale's (FES) normative group, the overall perception of support from family members and friends was "below average" for all of the groups of women in this study.

Depression and Anxiety in the Mother's Groups

The AIDS-diagnosed women and the methadone-maintained women who participated in this study reported experiencing a greater incidence of dysthymia, or "mild depression," defined as low energy levels, difficulty thinking clearly, feelings of guilt, low self-esteem, social isolation, pessimism, irritability, sad mood, and learned helplessness compared to the women in MDI normative group (Berndt, 1986). This finding was consistent the vast literature positing relationships between negative life-stressors and depression. In contrast, the community sample group of women in this study self-reported experiencing no depressive feelings on the MDI.

AIDS-diagnosed women and methadone-maintained women in this study reported experiencing greater levels of "state" and "trait" anxiety compared to anxiety levels reported in the STAI normative sample group of women. As expected, AIDS-diagnosed women also described themselves as more situationally and more chronically anxious than methadone-maintained women and women in the community sample group. However, an unexpected finding in this study was that women in the community sample group reported having greater levels of both "state" anxiety and "trait" anxiety than the subjects in the STAI normative group. While each of the groups of women in this study reported having greater than average amounts of anxiety compared to women in their age group in the STAI normative sample, there were no significant differences in anxiety levels among AIDS-diagnosed women, methadone-maintained women or women in the community sample group.

The results of these findings are consistent with previous investigations of psychological distress and coping in women with HIV infection which suggest that over one-third of AIDS-diagnosed women will have significant levels of depressive symptoms (Linn, Anema, Estrada, Cain & Usoh, 1994). However, data on depression in HIV-positive women and AIDS-infected women is sparse. Research on the levels of anxiety in AIDS-diagnosed women is also very sparse with limited consensus regarding whether or not anxiety is a predestined outcome of an HIV/AIDS diagnosis. Some studies report finding that HIV-positive women experience even higher levels of anxiety than HIV-positive men (Bromberg, et al., 1991). Others report high levels of both anxiety and depression in HIV-positive women and AIDS-diagnosed women (Bialer, Prenzlauer, Getter, & Wallach, 1992; Kaplan, Marks, & Mertis, 1997). However, other researchers

like Beevor, Catalan, Barton and Gazzard (1992) and Brown and Rundell (1993) have found very few significant indicators of psychological distress in HIV-positive women regardless of whether they are symptomatic or asymptomatic.

Prevalence studies with respect to psychological distress in HIV-positive and AIDS-diagnosed women are often characterized by small sample sizes and frequent comparisons made to distress levels reported by men with HIV and/or AIDS-related illnesses. As the number of women with AIDS increases, understanding how women with AIDS function psychologically compared to HIV-negative women has become imperative to researchers and mental health practitioners and, in the broader sense, to professionals who deal with their children and their families ins settings likes schools and community mental health clinics. Unfortunately, there are some indications that depressed "mood" (Kemeny et al., 1994), anxiety (Ironson et al., 1990), and loneliness (Antoni et al., 1990) may serve to advance the HIV/AIDS disease process for persons-with-HIV.

Depression, Anxiety, and Self-esteem in the Children's Groups

Children with AIDS-diagnosed mothers, children with methadone-maintained mothers and children with mothers from the community sample group who participated in this study reported feeling "average," or nonclinical, levels of depression compared to the CDI normative group of children. In fact, children with AIDS-diagnosed mothers actually perceived themselves as experiencing a lesser amount of depressive feelings than children with methadone-maintained mothers. Most surprisingly, children from the community sample perceived themselves as experiencing a greater number of depressive

feelings than children with AIDS-diagnosed mothers or children with methadone-maintained mothers.

The children in this study all reported experiencing "average" amounts of anxiety compared to the levels of anxiety reported by the RCMAS normative sample group of children. However, the RCMAS scores of children with methadone-maintained mothers were more elevated than the scores of children with AIDS-diagnosed mothers and the scores of children from the community sample. As anticipated, children from the community sample perceived themselves as having the least amount of anxiety among the children groups in this study.

All of the children in this study reported having a "medium," rather than "high" self-esteem. It was not anticipated, however, that self-esteem scores of children with AIDS-diagnosed mothers would, in fact, be greater than the self-esteem scores of children of methadone-maintained mothers and children of mothers from the community sample group. In sum, children in this study whose mothers were AIDS-diagnosed reported having greater levels of positive self-esteem and experiencing fewer depressive feelings than children with methadone-maintained mothers.

These findings have implications for continued debate about the distinctions between childhood depressive disorders and childhood anxiety disorders. Self-report measures have not been particularly successful in distinguishing between children who are anxious, children who are depressed, and children who are both depressed and anxious (Ollendick & Yule, 1990; Wolfe et al., 1987). Moreover, in a 1992 study by Brady and Kendall, children with diagnosed depressive disorders and children with diagnosed anxiety disorders reported having equally elevated symptoms in separate

measures of both depression and anxiety. Comorbidity between depression and anxiety in children is frequent but, in general, anxiety is thought to proceed depression (Cole, et al., 1998; Spence, 1997).

Although children living with AIDS-diagnosed mothers and children living with methadone-maintained mothers in this study did not report experiencing clinical levels of depression, anxiety of negative self-esteem, it is noteworthy that significant relationships were found between the child's self-reported functioning with the mother's perception of their functioning in these two groups. More specifically, there was a significant relationship between an AIDS-diagnosed mother's perceptions of the child's hyperactive behaviors and academic problems with the child's self-reported depression. There was also a significant relationship between methadone-maintained mother's perceptions of her child's anxiety with the child's self-reported depression. These finding were consistent with and supportive of the concept of "masked" depression in children.

Due to the small sample size of the three groups of children who participated in this study, its findings are descriptive and exploratory and no definitive conclusions can be drawn from these results. However, it was completely unanticipated that emotionally "at-risk" children with AIDS-diagnosed mothers and children with methadone-maintained mothers would perceive themselves as being less depressed and having higher levels of self-esteem than children with mothers from a community sample group. It is possible to speculate that the use of the face-to-face meetings to complete the self-report measures with children at the site of their mothers treatment centers (a methadone-maintenance clinic, a hospital-based community mental health center) may have influenced at least some of the children to report more socially desirable responses.

The results of the quantitative analyses used in this study need to be interpreted in light of its methodological limitations. Nevertheless, the findings underscore the complexity of identifying the presence of sub-clinical depression or anxiety which may exist in a nonreferred, but "at-risk" children population. The findings also have implications about the distinctions between childhood depressive and anxiety disorders, psychological functioning in AIDS-diagnosed mothers, and the role of family support as a possible mediating variable for children in "at-risk" families.

Summary of Findings from the Anecdotal Questionnaire

Anecdotal data were gathered in this study by means of the Anecdotal Questionnaire (AQ) which was administered to all mothers and children in each of the groups to gain a sense of what was, or was not, "useful" during the study; how the study might have been "done in a different way;" and finally, what "future goals" mothers and their children had for one another. In general, similarities were found among each group of mothers and children in terms of their perceptions of this study's "usefulness" as well as with respect to how they believed the study might have been "done in a different way." The mothers' future goals for themselves revolved around: (a) acquiring financial stability, (b) obtaining improved housing, and (c) pursuing continued education.

Not surprisingly, several AIDS-diagnosed women and methadone-maintained women included "recovery" from drugs and/or alcohol as one of their future goals. Mothers' future goals for their children were primarily education-oriented or involved an expression of the hope they held for the child's personal-growth. Children's future goals

for themselves were education-oriented or had to do with a specific career they hoped to obtain when they grew up.

Children's goals for their mothers were essentially parallel to their mothers' self-goals: improved housing and financial stability. None of the children with AIDS-diagnosed mothers or methadone-maintained mothers mentioned drug and/or alcohol "recovery" as a future goal they had for their mothers. Three children of AIDS-diagnosed mothers did express a longevity goal for their mothers.

Mothers AO Comments

"Usefulness" of Their Participation: AIDS-diagnosed women generally perceived their participation in this study to be "useful." Their responses included comments such as: "It makes me feel better; I like to talk;" and, "It gave me a little understanding about some things and I needed to cry for a long time." In contrast, only one woman from the AIDS-diagnosed group of mothers chose to comment about the "usefulness" of participating in the study for her child. This single parent of a thirteen-year-old girl, stated the thought the study was "useful" for her daughter because "It might let her get things off her mind."

Some of methadone-maintained women did perceive their participation in this study to be "useful" ("It gave me a chance to talk; it made me think"). However, most methadone-maintained women did not comment or stated "I don't know" when asked about the "usefulness" of this study to themselves or to their child. More than half of the mothers in the community sample group of women found their participation in this study to be "useful" because: "It gives me a chance to talk." A majority of the women also

believed that the study was "useful" to their child for the same reason: "Let's her talk to somebody."

What Might Have Been Done in a Different Way: Although the AIDS-diagnosed women generally responded "I don't know" or "nothing" to the AQ question: "What might have been done in a different way" in this study, one mother of a fifteen-year old girl suggested that future studies: "Should have a place where we (mother and child) could talk to each other and relate to each other." In general, methadone-maintained women did not have any comment with regard to how the study might have been done "in a different way." However, four women did express negative remarks about the self-report instruments.

Specifically, these methadone-maintained women stated there should have been "easier answers" on the self-report instruments. Other negative comments were about a perception of redundancy in the self-report instruments ("The same questions gets asked over and over gets you confused"). A majority of women from the community sample group of mothers stated that "nothing" in the study might have been "done differently." Like the methadone-maintained women, however, several women in the community sample group of mothers viewed the MDI as having "too many" questions.

Goals for Themselves: AIDS-diagnosed women's future goals for themselves were basically health related goals ("be healthy; to live longer; enjoy my life while I have it") in addition to remarks conveying a "recovery" goal ("get off drugs; stay sober"). Most of the AIDS-diagnosed women also hoped to be able to have "more money" in order to get a "better" or a "bigger" apartment and "get out of this mess." None of the AIDS-diagnosed women expressed any plans for enrolling in continuing education

courses or training programs. Only one woman expressed a hope for a future career: "to become an HIV counselor."

In contrast, methadone-women reported a wide range of goals for themselves ("get a house; get a job; improve myself; make more money; be a better mother; go back to Puerto Rico and take care of my grandmother; to have no more kids"). None of the methadone-maintained women planned to enroll in educational courses or training programs. In contrast, future goals for the community sample group of mothers often included a number of career-oriented goals which would require additional education or training for them such as becoming "a nurse; a computer specialist; a psychiatrist." They also expressed financial stability goals that were characterized by statements like: "make more money; get rid of my bills." A number of the community sample group of women mentioned goals for improved housing ("get a house; move to a bigger apartment; get out of New Jersey").

Goals for Their Children: AIDS-diagnosed women's goals for their children included both education-oriented goals ("get good grades; go to college") and personal growth goals ("become what she wanna become; get a good job; be happy"). Interestingly, the AQ question concerning a mother's future goals for her child often elicited spontaneous regretful, disbelieving or self-blaming remarks from the AIDS-diagnosed women. Two women expressed regret over "sharing needles." Two other women regretted "having sex" with the drug-addicted fathers of their children. Three women expressed disbelief about "getting AIDS" after successfully and proudly being "clean" of drugs. Two women with HIV-positive toddlers at home made rather explicit

self-blaming remarks: "It's my fault." A mother of an HIV-positive three-year old more directly stated: "I made some rotten choices and we are all paying for it."

In general, methadone-maintained mothers hoped their children would accomplish education-oriented goals such as "to finish school; go to college." Two methadone-maintained women expressed a wish for their children to have "more help" in school because the children had poor grades. Only one woman in the methadone-maintained group of mothers expressed what might be characterized as a "regretful" theme with her comment about future goals she had for her child: "I hope she don't turn out like me." Mothers in the community sample group often expressed multiple goals for their child "to get a good education; to work in an office and not in a factory; to do better in school; make it out there in the world; become a teacher; go to college," and quite frequently, simply for their child to "be happy."

Children's AO Comments

"Usefulness" of Their Participation: Children with AIDS-diagnosed mothers, in general, did not respond to the AO question concerning the "usefulness" of this study to them or to their mothers. The most usual response for these children was with a shoulder shrug or by the child stating "I don't know." However, one eight-year-old girl did think that her participation in the study was "useful" to her. As she put it: "I like to go outside with my mom, but my mom she don't like to go outside." A reference, perhaps, to her feeling about having to stay indoors more often than she would like.

Children of methadone-maintained mothers reported that the study was "useful" to themselves and to their mothers. However, a majority of their responses were

characterized by long pauses or shoulder shrugs. The most typical response of those children who did choose to comment was that study was "useful" because "it was fun" for them to do. Children from the community sample group tended to feel that the study was "useful" with the majority of their responses characterized by comments like: "It made me think."

What Might Have Been Done in a Different Way: None of the children expressed an opinion about what might have been "done in a different way" in the study. Comments from the children in each of the groups were most typically "I don't know." However, one young boy in the community sample group of children responded: "Bring some candy!"

Goals for Themselves: The self-goals of reported by children with AIDS-diagnosed mothers mostly involved future career aspirations they had for themselves such as "be an ice skater; a fireman; a policeman; a teacher; a nurse." Self-goals expressed by children with methadone-maintained mothers also included several career aspirations like becoming: "a teacher; a football player; a policeman," but many also responded to the AQ by supplying education-oriented goals: "to get better grades."

One seemingly perplexed ten-year-old boy stated: "I can never make up my mind." Future self-goals for the children form the community sample group were most often about "doing better" in school, or "getting good grades," and someday going to "college." However, several children in the group also had very specific jobs in mind for themselves in the future: "teacher; nurse; doctor; lawyer; policeman; fireman."

Goals for Their Mothers: In general, children with AIDS-diagnosed mothers expressed financial stability ("get money") goals and improved housing ("a new home; a

different apartment") goals for their mothers. However, one youngster had a rather unique goal for his mother: "To get a gold jewelry with her name on it." A nine-year-old boy said his goal was for his mother was for her "To be the mother god wants her to be." Of the 10 children in the group who were reportedly "aware" of their mothers health status, only 2 children explicitly addressed an awareness of the situation: a sixteen year old girl commented "I hope she feel better soon;" and a thirteen year old boy stated that his goal for his mother was for her "To live as long as she possibly could." Children with methadone-maintained mothers generally expressed improved housing goals ("to have a beautiful house"), career goals ("to be a doctor and a famous runner") or personal-growth goals ("to be the best she can be") for their mothers. The community sample group of children's goals for their mothers were similar: "Get a better job; a new house; to be happy."

Limitations of this Study

The purpose of this study was to examine the construct of emotional dysregulation in children living with AIDS-diagnosed mothers in terms of the child's level of depression, anxiety and negative self-esteem. It was designed as a preliminary, or pilot study, toward a goal of acquiring a further understanding of children in AIDS-affected families whose mothers have AIDS. However, several methodological weaknesses are evident and merit concern.

The primary limitation of the study is its small sample size and the self-selected nature of the subject participant-groups. Therefore, generalizability of its findings is seriously limited. Although non-infected children living with HIV-positive mothers are

the largest group of children in AIDS-affected families, samples for research are particularly difficult to recruit among HIV/AIDS infected women and their children. This is also true for methadone-maintained women and their children.

Practical constraints limited subject recruitment for this study to two urban, New Jersey sites that provide treatment and supportive services to women with AIDS and to methadone-maintained women. Consequently, access to greater number of potential participants who might have participated in the study was not possible. Replication studies with larger samples will be necessary to assess the reliability of the findings.

The mothers and children who participated were all essentially "self-selected" by the mother. As a result, the external and internal validity in this study was affected. Future studies may seek to address this issue by attempting to randomize subject participation. In addition, future researchers may want to consider obtaining data from samples of HIV/AIDS-diagnosed women with children who are outside of community-based treatment, social service networks.

There is a wide variability among families living with AIDS with respect to their socioeconomic status, ethnic/cultural background and geographic location. The AIDS-diagnosed women with children who participated in this study resided in a Northern New Jersey inner city area. A majority of the women were unemployed with limited financial resources and headed single-parent families. Consequently, they may not have been representative of other AIDS-affected families even though minority women of low socioeconomic status are disproportionately represented among persons with AIDS throughout the country.

Another major limitation of this study was its primary reliance on self-report instruments to assess maternal levels of depression and anxiety and to assess children's levels of depression, anxiety and negative self-esteem. The depression and anxiety scales that were used in this study with the mother's groups (MDI and STAI) have not been standardized on women with HIV/AIDS. Therefore, their norms may not be optimally comparable with this group of AIDS-diagnosed women as they were used in the present study. Additionally, completing the research instruments at sites providing treatment and support for the adult participants may have influenced the mother and, perhaps, even the child participants toward supplying more socially-desirable responses on the self-reports measures. This may be of special concern, particularly, for the methadone-maintenance center group of participants in this study where compliance with treatment is related to continuance of any of the client services that are provided there to them.

Reliance on self-report instruments as the only measures of children's emotional dysregulation generated several other problems besides these more typical response-bias concerns. An attempt was made to operationally define the construct of emotional dysregulation in terms of a child's self-reported depression, anxiety and negative self-esteem that was based on research literature describing emotional functioning in children with known psychological "risk" factors: parental loss and parental psychopathology. It may be the case, however, that the construct of "emotional dysregulation" is a difficult one to measure economically, especially with respect to samples of non-referred and, presumably, emotionally healthy children. Moreover, there were no controls included in this study's design to address whether or not the instruments that were used were beyond the cognitive and emotional levels of the children.

Although the CDI and RCMAS have been widely used in studies of childhood depression and anxiety, it is noteworthy that several overlapping items appear on the both the CDI and the RCMAS. For example, the statement "I am tired all the time" appears on the CDI while the statement "I am tired a lot" appears on the RCMAS. Due to the overlap in some of the items on these two instruments, it is possible that they may not identify fine distinctions between depressive feelings and anxious feelings for some samples of children in the absence of other impressions that might have been gathered from sources like diagnostic, clinical interviews. It was also beyond the scope of this investigation to examine whether or not factors such as the child's level of cognitive development or academic achievement history may have influenced, or been related to, their response sets in any way on the CDI, RCMAS and SEI. It is anticipated that future studies may address these difficulties and will be able to characterize the construct of "emotional dysregulation" in a more efficient manner.

An additional limitation should be considered when interpreting the results of this study. It revolves around the practice of assessing children's functioning when the mothers are used as informants. Parents, and mothers in particular, are often considered to be the most important source of information on their children's emotional functioning, but variability in agreement between mother and child report has been frequently demonstrated in past studies. A mother's perceptions of her child's functioning may not, in fact, be the child's perception of his or her own feelings and behaviors.

In general, mothers report noticing a greater incidence of externalizing behaviors (conduct problems) than children self-report and, conversely, children self-report a greater incidence of internalizing behaviors such as depression, anxiety, and somatic

complaints than their mother's report (Herjanic & Reich, 1982; Hodges, Gordon, & Lennon, 1990; Kenny & Faust, 1997). Future studies need to include alternative data collection methods including observations, standardized psychodiagnostic assessments, or clinical interviews that could serve to expand and better validate self-reported parent-child emotional functioning. For children too, additional data from other adults or systems involved with their day-to-day lives, such as teachers or their school, would be most useful to explore.

Another serious limitation of this study with implications for future research was the potential for a possible confounding variable overlap in the AIDS-diagnosed and methadone-maintained mothers' groups. Transmissibility of HIV/AIDS for the majority of infected women is well documented as being related to intravenous drug use and/or commercial sex work to obtain drugs. However it was not possible to identify, or to control for, any variable overlap which may have been present in the AIDS-diagnosed women and methadone-maintained women in this study due to a strict adherence to client confidentiality protocols that were used at each of their recruitment sites. An examination of the women's responses on the AQ did suggest the presence of a possible confounding variable overlap within the AIDS-diagnosed women's group, but not for the methadone-maintained women's group or the community sample group of women. More specifically, half of the AIDS-diagnosed women reported on the AQ that they had received in the past, or were currently receiving, mental heath therapy on the AQ that was related to "detox counseling" or "substance abuse counseling."

This presents perhaps one of the most complex challenges for researchers who are interested in understanding children living with families that are affected by AIDS.

Families affected by AIDS are most typically living within a substance-using subculture with a concomitantly vast range of stressful relationships in them. Research with children of substance-using parents remains small. It has been restricted mainly to examinations of the children's cognitive and perceptual-motor functioning rather than to elements of their social-emotional development, but it appears that at the very least the children are "at-risk" for behavior problems and learning difficulties in school (de Cubas & Field, 1993).

Children living with AIDS-diagnosed mothers in drug-enculturated families are, as a result, developing with numerous ecological, "risk" factor present. They are growing up with many of the known psychological "risk" factors that have been associated with HIV/AIDS disease (parental chronic illness, possible anticipatory grief reactions, and HIV-related social stigma). In the case of children living with an AIDS-diagnosed mother, the task of separating and evaluating the effects of these multiple "risk" variables in order to better understand just how they impact on children's psychological functioning and coping styles is an especially difficult one that will require continued effort and commitment from future researchers.

Recommendations for Future Research

There are several important research studies that can be pursued as a result of this present investigation of emotional dysregulation in children living with AIDS-diagnosed mothers. First, parent-child relationships and children's adjustment patterns in AIDS-affected families continues to remain relatively unexplored. For example, to what degree has the HIV-related illness impacted on the mother-child relationship in terms of the parenting style? Are there differences in pre-HIV diagnosis and post-HIV diagnosis

parenting styles from the parent's point of view or, if the child is aware of the HIV-related maternal illness, from the child's point of view?

Consistent with expectations, the AIDS-diagnosed mothers in this study self-reported feeling more mildly depressed and mildly anxious compared to women in general. They also reported having relatively few family supports for themselves. On the other hand, and in contrast to expectancies, their children did not self-report experiencing any significant levels of depression, anxiety and negative self-esteem. Although replication studies are needed, this suggests that there may be an overlooked resiliency within the population of children with AIDS-diagnosed-mothers. As a result, identifying successful coping strategies of children with AIDS-diagnosed mothers merits further investigation.

To date there also remains scant research to explore which variables in a family system, or in an extended-family system, are present which seem to allow some AIDS-affected families to maintain supportive functioning for their children while other AIDS-affected families cannot. One possible direction for future studies may be to explore the children's access to nurturing environments or "holding environments" (Winnicott, 1965). What significant "attachment relationship" (Bowlby, 1973), or relationships, are present in their lives that serve as buffers to prevent the development of emotional dysregulation for children in AIDS-affected families?

Conclusion

The number of children with AIDS-diagnosed parents in our society is steadily growing creating a pressing challenge for concerned mental health practitioners and researchers to develop comprehensive intervention strategies for them in the context of

the family, the educational system and the larger community. At present, there is an absence of data to explore children's psychological reaction to their parent's AIDS-diagnosis status in the literature despite significant clinical implications for potentially maladaptive adjustment patterns. Additionally, there remains scant information available to mental health practitioners about the relationship between an AIDS-diagnosed parent's state of psychological distress and their child's overall functioning. The literature on significant-other "loss" and parental dysfunction provides but a preliminary context for beginning to understand these children. The need for further research is very clear.

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Appendix A

PARTICIPANT SOLICITATION LETTER

Dear Group Member,

I am a child clinical psychology doctoral student at Seton Hall University looking for mothers and children to volunteer as participants in my dissertation study. The study will be trying to see how children and their mothers think children are developing and whether or not how a mother feels has anything to do with how her child feels. Approximately 1 hour of your time will be needed to fill out some questionnaires and answer some brief questions here at this center.

I will also be asking you to permit your oldest child who is between the ages of 8-16 years old to fill out some questionnaires and answer some brief questions here at this center at a convenient time for you. It takes about 45 minutes. No names will be used on any records used in the study. They will be kept completely confidential.

If you are interested in participating in this study, I will be here next week after the group meeting to answer any questions you may have. Or you can contact me in person by phone for more information at 256-8948.

Thank you in advance for your help.

Sincerely,

Kathleen O'Brien-Sheber, M.A.

Appendix B

DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

Child Information:

1. Age _____   2. Sex _____   3. Race _____

4. Grade _____   5. Number of brothers or sisters:

                                        Age ____ ____ ____ ____

                                        Sex ____ ____ ____ ____

6. Birth position: Oldest _____ Middle ____ Youngest _____   Only Child ____

Mother Information:

7. Age _____   8. Race _____   9. Education level _____

             10. Are you: Married _____   Number of Years _____

                            Separated _____   Number of Years _____

                            Divorced _____   Number of Years _____

                            Widowed _____   Number of Years _____

                            Living together _____Number of Years _____

                            Single _____

11. Are you employed _____   12. Kind of Work _____

13. How long have you worked at this job _____

14. Have you ever been in therapy (Y) (N)   15. How Long?_____

16. For what reason? _____

17. Medical status or Present concerns?_____

18. If you have any health concerns, how long have you been ill?

19. for the past 6 months _____between 6 months and a year _____

over one year _____

19. My child is aware _____ unaware of my health status _____

20. How many hours a week do you spend:

at work _____with friends _____meetings _____with child _____at school

_____

21. Yearly income from all sources: under $10,000 ____ $10,000 to $15,000 ____

$15,000 to $20,000 _____over $20,000 _____

Father Information:

22. Age _____ 23. Race _____ 24. Education level _____

25. Is he employed?_____ 26. Kind of work _____

27. Yearly income _____

28. Has he been in therapy?_____ 29. How long?_____

30. For what reason?_____

31. Medical status or Present concerns?_____

_____

32. If he has any health concerns, how long has he been ill?

33. or the past 6 months _____ between 6 months and year _____over one year _____

33. My child is aware _____ unaware of his health _____

34. How much time does he spend with your child?_____

35. What kinds of activities do they do?_____

Appendix C

CONSENT FORM TO ACT AS A PARTICIPANT

Consent Form to Act As a Participant

A research study is being conducted by Kathleen O'Brien-Sheber, a child clinical psychology doctoral student at Seton Hall University, to see how children and their mothers think children are developing and whether what a mother feels has anything to do with how her child feels. The information may be helpful to psychologists who work with children and their mothers. There are no foreseeable risks to you or your child.

Participation is voluntary. If you or your child decides not to participate, or decides to withdraw at any time, it will in no way jeopardize any of the services you presently receive at this facility.

Absolutely no names or identifying information will be used in any publication of this study. Confidentiality of all records will be kept by Ms. O'Brien-Sheber.

You will be asked to fill out 5 questionnaires and to comment, if you choose, on your future goals and what it's like to be in a research study in a short audiotaped group interview. It will take approximately 1 hour. There are no right or wrong answers. The questionnaires which will be used are: a Demographic Questionnaire to gather personal data information about you, your child and your child's father; a Self-Evaluation Questionnaire which asks you to rate statements describing a variety of emotions in the way you presently feel, or generally feel, about them; the MDI which asks you whether or not different moods and attitudes some people have are typical ones for you; the Family Environment Scale which asks you to decide whether statements about relationships and environments in families are true or false for your own family; the Conners' Parent Rating Scales which asks you to rate any problem behaviors you may have noticed in your child.

Your child will be asked to fill out 3 questionnaires, talk about their future goals for you and for themselves, and about being in this study which will be audiotaped. It will take about 45 minutes. There are no right or wrong answers. The questionnaires which will be used by your child are: the Coopersmith Inventory which asks children to pick out attitudes about social, school and family areas they believe are "like" or "unlike" the ones they have for themselves; the What I Think and Feel where children check-off whether or not they experience a variety of emotions and thoughts about themselves; and, the CDI where children rate statements about different moods or feelings they may sometimes have.

I understand that if I feel any discomfort as result of participating in this study, or if my child feels any discomfort, Kathleen O'Brien-Sheber will be available to discuss this with us and assist in developing an appropriate follow-up referral. She can be

contacted by mailing the stamped postcard she has given me or calling the phone number on it. A similar postcard will be given to my child.

I understand that I will be provided a written summary of the research findings at the end of the study if I request one. If my child requests a conference about the results, it will be scheduled at the end of the study.

This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subject's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the Office is 201/378-9806.

I have read the material above, and any questions I asked have been answered to my satisfaction. I agree to participate in this activity realizing that I, or my child, may withdraw without prejudice at any time.

I attest that I am the mother of_____and hereby authorize my child's participation as a subject in this research study.

_____

Signature:

_____

Witness:

Date:_____

_____ Please check here if you would like a written summary of the results and include your address below.

Appendix D

MOTHER'S ANECDOTAL DATA QUESTIONS

Mother's Anecdotal Data Questions

1. "Please talk about any part of being in this study that you think:

(a) was useful to you or your child;

(b) was not useful to you or your child;

(c) might have been done in a different way?"

2. "Do you have any special future goals for:

(a) yourself;

(b) your child?"

Appendix E

ASSENT FORM FOR CHILDREN

Assent Form for Children

This is a study of how children and their mothers think children are developing. It involves filling out 3 questionnaires about different attitudes, thoughts and feelings children sometimes have. There are no right or wrong answers. You will also be asked to talk for audiotaping, if you care to, about any future goals you have for yourself or your mother and your ideas about being in a study. It will take about 45 minutes.

You do not have to participate in this study and you can stop being in the study whenever you want to. If you decide not to participate, or to withdraw from it after it starts, your decision will in no way affect the services your family receives at this facility.

Your answers will be used without your name. All records will be completely confidential. If you want to know the results of the study, you can have a conference when it is done.

I understand that if I feel uncomfortable as a result of this study Kathleen O'Brien-Sheber will be available to discuss it with me and my mother. I can contact her by mailing the stamped postcard she has given me or calling the phone number on it.

This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subject's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the Office is 201/378-9806

I have read this form, or it has been read to me, and I understand it. All of my questions have been answered to my complete satisfaction.

_____

Signed: Name

Witness: _____

Date:_____

_____ Please check here if you want a conference about the results of the study and write your address below.

Appendix F

CHILDREN'S ANECDOTAL DATA QUESTIONS

Children's Anecdotal Data Questions

1. Please talk about any part of your being in this study which you think:

    (a) was useful to you or your mother;

    (b) was not useful to you or your mother;

    (c) might have been done in a different way?

2. Do you have any special future goals for:

    (a) yourself;

    (b) your mother?