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Suicidal ideation, object relations, and early experiences : an investigation using structural equation modeling.

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SUICIDAL IDEATION, OBJECT RELATIONS, AND EARLY EXPERIENCES: AN INVESTIGATION USING STRUCTURAL EQUATION MODELING

A Dissertation Presented

by

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For My Parents

ACKNOWLEDGEMENTS

To-day I wear these chains, and am *here!* To-morrow I shall be fetterless! - *but where?*

- Edgar Allan Poe, *The Imp of the Perverse*

At the conclusion of my graduate school career, I have many people to acknowledge and to thank. I owe a tremendous debt of gratitude to my advisor, Professor Richard Halgin; with his talent for balancing aspiration and sensibility, he knows when to bring me down to earth and when to let me soar. His support and enthusiasm have sustained me through the triumphs and disappointments of graduate school. Professors Sally Powers, James Averill, and Clement Seldin, the members of my dissertation committee, have provided incisive commentary and essential encouragement. Liana Brower, my research assistant for 1 1/2 years, brought her exceptional competence, dedication, and humor to the laborious task of coding thousands of TAT stories. As always, I am deeply indebted to my dear friend, Michelle Jacobo, for her abiding support, wisdom, humor, and love. For more than a decade, I have shared my life with Jon Farnham, who challenges me intellectually, questions me relentlessly, encourages me emphatically, and loves me absolutely. Finally, I am incredibly fortunate to have Ted Ellenhorn as my guide for the thrilling, sometimes agonizing, and ultimately liberating journey of self-discovery that is psychotherapy, a journey which has paralleled and enriched this dissertation.

ABSTRACT

SUICIDAL IDEATION, OBJECT RELATIONS, AND EARLY EXPERIENCES:

AN INVESTIGATION USING STRUCTURAL EQUATION MODELING

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Deleterious early experiences, wrought by childhood abuse, parental dysfunction, and inconsistent relationships with parents, have been repeatedly associated with suicidal ideation and suicide attempts in adolescence and young adulthood. Both depression and aggression have been correlated with suicidality as well. The precise relationships among these variables remain largely unspecified, however, and contradictory findings portend our imperfect understanding of youth suicide.

Psychoanalytic object relations theory suggests a mechanism by which early experiences influence later functioning, providing a link between disrupted caretaking in childhood and suicidal ideation in early adulthood. Using structural equation modeling (SEM), this study examined the extent to which experiences of loss, trauma, and deprivation in early life induced an object world that left one vulnerable to suicidal ideation in young adulthood. The dual aim of the study was to obtain confirmation for the mediating role of object relations in the development of suicidal ideation, and to

explore the specific relationships among early experiences, object relations, depression, aggression, and suicidal ideation.

Two hundred and fifty college undergraduates participated in group administrations of the Thematie Appereeption Test (TAT), and eompleted the Adult Suicidal Ideation Questionnaire, Beck Depression Inventory, Hopelessness Seale, Aggression Questionnaire, Early Experiences Questionnaire, and Suicide Attempts Questionnaire. The Soeial Cognition and Objeet Relations Scale (Westen, 1990a) was used to assess four dimensions of object relations from TAT stories.

SEM supported the hypothesis that object relations play a crucial role in mediating between deleterious early experiences and suicidal ideation in young adulthood. Traumatie early experienees, particularly physieal, sexual, and emotional abuse perpetrated by trusted adults, left an indelible mark on object relations. An object world marked by expeetations of unpredietability, rejection, and potential malevolence from others in the eontext of earnest investment in interpersonal relationships led to elevated levels of both depression and aggression in these eollege students. Depression, but not aggression, precipitated thoughts of suieide, lending support for the psychoanalytic postulate that depression ensues when aggression is turned toward the self. Some intriguing results and their relation to the literature, limitations of the study, and direetions for future research are diseussed.

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CHAPTER 1

INTRODUCTION

The enigma of suicide has long been a subject of philosophical, clinical, and empirical interest. Since Freud, psychoanalytic theorists have struggled with the paradox of the wish to die and its relation to early traumatic experiences of loss and deprivation, and have endeavored to explain the mechanisms by which parental loss and disrupted caretaking in childhood precipitate difficulties in later life. One approach to understanding these mechanisms has been to postulate the existence of intrapsychic structures, or object relations, that are shaped by early life experiences and influence functioning throughout life. Object relations theory has inspired much theoretical yet relatively little empirical consideration.

Following a brief review of psychoanalytic theories of suicide and the relevant empirical research, a study is presented that explored associations among childhood experiences, characteristics of object relations, and depression, aggression, and suicidal ideation in a college student sample. The study examined the extent to which experiences of loss, trauma, and deprivation in early life induce an internal object world that leaves one vulnerable to suicidal ideation in young adulthood, and thereby addressed a lacuna in our knowledge of suicidal tendencies in young people.

Theoretical Considerations

Psychoanalytic Object Relations Theory

While differences among various psychoanalytic object relations theories are legion (Greenberg & Mitchell, 1983), they share a common emphasis on the centrality

of intrapsychic structures that are created out of both actual experiences with important persons in childhood, and one's inner fears and fantasies. Westen (1990b) defines object relations broadly as "the cognitive, affective, and motivational processes mediating interpersonal functioning, and the enduring patterns of interpersonal behavior that draw upon these intrapsychic structures and processes" (p. 686). These internalized structures are both conscious and unconscious; they comprise one's views of self and others, and expectancies of interpersonal relationships. Object relations are thus multidimensional, and constitute a mechanism by which childhood experiences exert their considerable influences throughout life. "Crucial exchanges with others leave their mark; they are 'internalized' and so come to shape subsequent attitudes, reactions, perceptions" (Greenberg & Mitchell, 1983, p. 11). In general, parental loss or dysfunction, particularly during the pre-oedipal period, results in chronic disavowed rage, anxiety due to separation fears, and a malevolent internal object world (Bowlby, 1973; Kernberg, 1975). The scope of potentially pathogenic early experiences to which children may be exposed is broad, ranging from mild parental depression resulting in periodic unempathic parenting, to the sudden death of a loved parent, to decades of ritualized sexual abuse; clearly, the consequences of early experiences for the development of object relations are determined, at least in part, both by the child's developmental level and by the types of experiences he or she encounters in early life (Westen, 1990b).

Psychoanalytic Theories of Suicide

Working from this psychoanalytic paradigm, a number of theorists have considered the role that early disrupted or inadequate caretaking relationships play in the emergence of self-destructiveness, including suicidality, in adolescence and adulthood.

An eloquent proponent of the psychoanalytic view of suicide, Menninger (1938) expanded upon Freud's theorizing about the opposing forces of the life and death instincts; self-destructiveness results when the latter overwhelms the former. Menninger explained self-destructive tendencies that emerge in adulthood as arising from untoward frustrations and deprivations in childhood; "injustices perpetuated upon a child arouse in him unendurable reactions of retaliation which the child must repress and postpone but which sooner or later come out in some form or other" (p. 181). Menninger elucidated three unconscious wishes underlying suicide: the wish to die, the wish to kill, and the wish to be killed. Suicide, Menninger believed, merges in one person the murderer and the murdered; the three components of the suicidal wish are extant, in varying proportions, in all acts of self-destruction.

Zilboorg (1937) de-emphasized the role of the death instinct in his theory of suicide; he claimed that to attribute suicide to the death instinct is to establish a tautology that contributes little to etiologic understanding. Instead, Zilboorg believed that truly suicidal individuals are those who have experienced the death of an important person with whom they have identified in childhood or adolescence; suicide ensues from the desire to join the dead person as part of a primitive mourning process. Based

upon their work with suicidal children, Bender and Schilder (1937) added to Zilboorg's formulation a second important motive for suicide: the desire to escape from an intolerable situation that obtained from a rejection or deprivation of love. The deprivation ignites the child's aggressive impulses toward the parent, and guilt results; to obviate the guilt, the child turns aggressive impulses upon the self. Self-destructive acts in this context serve to punish both the child and the parent; death brings absolution for one's aggression.

Indeed, Bender and Schilder's formulations appear to be borne out by research with suicidal preschool children conducted by Rosenthal and Rosenthal (1984), who ascertained four motives for suicide: (a) self-punishment, (b) escape, (c) reunion with a central nurturing figure, and (d) rectification of an unbearable life situation. Further support is afforded by a content analysis of suicide notes left by adolescents who committed suicide; Posener, LeHaye, and Cheifetz (1989) found the content of these suicide notes to be consonant with the psychoanalytic view of suicide as resulting from an ambivalent relationship with a parent, loss of or rejection by the parent, and direction of aggression against the self.

Winnicott (1939/1990) viewed aggression as the instinctual, appetitive component of love; hate and love, then, are intrinsically intertwined. Winnicott believed that the security of the home environment enables the child to express innate destructive impulses without fear of effecting irreparable damage; through their expression, the child learns to channel destructive impulses into constructive and creative avenues (Winnicott, 1960/1986). Deprivation, particularly that wrought by separation from

parental figures, undermines the security of the home environment and causes the child to fear that destructive impulses can no longer be safely contained.

Depression following deprivation intimates that destructive impulses are under one's internal control, although control is exacted at an enormous price, as important others are protected from destructive impulses through deadening depression (Winnicott, 1963/1986). Aggression, on the other hand, invites external control as it manifests the destructive impulses outward, toward others or toward the self (Winnicott, 1939/1990). Thus, aggressive acting out, including self-destructive behavior, belies depression and signifies hope that the environment can successfully contain the destructive impulses (Winnicott, 1967/1986). Winnicott (1946/1990) explained it this way: "Unless he gets into trouble, the delinquent can only become progressively more inhibited in love, and consequently more and more depressed and depersonalized, and eventually unable to feel the reality of things at all, except the reality of violence" (p. 116).

Building on the work of earlier psychoanalysts, Bowlby (1973, 1980) advanced the study of children's attachment to parental figures and the long-term pernicious effects of disruptions in caretaking. In his view, loss of parental figures, both threatened and actual, rouses feelings of anger toward the parent that may manifest as hostility directed toward manifold targets, including the self (Bowlby, 1973). Nonetheless, such anger is functional in that it encourages reunion with the caretaker and, through punishment of the parent, discourages subsequent separations, thereby strengthening the attachment bond. Intense or persistent anger, on the other hand, is

dysfunctional in that it weakens the attachment bond. Consequently, prolonged or repeated separations have a double deleterious effect: dysfunctional anger is aroused, while attachment is attenuated. Children who are subjected to repeated threats of abandonment in addition to intermittent separations from parents may experience the greatest rage. Suicide, then, arises from simultaneous feelings of hostility and love toward parental figures, and may be understood as an alternative to murdering one's parents (Bowlby, 1965).

Bowlby (1980) viewed suicidal behavior as a direct result of early loss. He delineated four motives for *completed suicide* as a response to the loss of an attachment figure that intimate the wish to die and thereby to detach permanently from others: (a) a desire for revenge against a departed person and a redirection of the resulting murderous rage onto the self, (b) a desire to punish the self in order to expiate an overpowering sense of guilt for contributing to a death, (c) a wish for reunion with a dead person, and (d) a feeling of hopelessness about establishing future relationships. Alternatively, Bowlby ascribed motivation for *suicide attempts* to the wish to punish, as well as to elicit nurturance from, neglectful caregivers, thus strengthening the attachment bond.

Evidence from the Empirical Literature

Although not directly or manifestly informed by psychoanalytic theory, suicide researchers using a variety of methods with clinical and non-clinical populations at various developmental levels have provided incidental support for psychoanalytic postulates regarding suicide.

Family Characteristics and Suicide

Suicidal individuals are frequently exposed to disrupted or inadequate caretaking experiences in early life, suggesting some basis for the psychoanalytic hypothesis that such experiences are of etiologic importance in suicide. The families of suicidal young people are frequently characterized by four interrelated difficulties: (a) loss of parental figures through death, divorce, or marital separation, as well as repeated threat of loss due to constant or severe marital conflict; (b) family discord and lack of cohesion; (c) parental dysfunction, such as depression and other psychiatric illness, as well as suicidality, alcoholism, and drug abuse; and (d) traumatic experiences, most notably physical abuse and sexual abuse (for reviews, see Anderson, 1981; Petzel & Riddle, 1981; Pfeffer, 1986, 1989; Spirito, Brown, Overholser, & Fritz, 1989; Walsh & Rosen, 1988).

In a large-scale study of sociologic, psychologic, and psychiatric suicide risk factors, Maris (1981) compared 517 individuals of various ages who died by suicide with matched groups of those who attempted suicide and those who died by natural causes. He found that although the prevalence of parental death was similar for each group, those who died by suicide were typically younger at the time of the parent's death. Interestingly, Maris (1981) found other experiences of early loss, such as separations from either parent in the first year of life and loss of the father following parental divorce, to be most common among those who attempted, rather than those who died from, suicide. Furthermore, in a large college student sample, Rudd (1989) found suicidal ideation to be more prevalent among students from disrupted than intact

families. Conversely, Khan (1987) reported that suicidal and non-suicidal adolescent psychiatric inpatients experience similar levels of parental loss and separation. Moreover, based on an extensive review of the literature on adolescents who attempt suicide, Spirito and his colleagues (1989) concluded that parental divorce and separation are general risk factors for emotional distress in adolescents, rather than specific risk factors for suicidal behavior.

Numerous researchers, including Meneese and Yutrzenka (1990), Withers and Kaplan (1987), and dozens of others reviewed by Petzel and Riddle (1981) and Spirito and his colleagues (1989), have demonstrated that families of suicidal individuals are often characterized by disorganization, ambivalence, rejection, intolerance for autonomy, and violence. Not surprisingly, parents of suicidal young people frequently manifest high levels of depression and suicidality themselves (Kienhorst, Wolters, Diekstra, & Otte, 1987; Pfeffer, Plutchik, & Mizruchi, 1983). Family characteristics may exert differential gender effects, however. In a study of inpatient adolescents, for example, Lewinsohn, Rohde, and Seeley (1993) found that suicidal young women experience relationships with their parents as highly discordant, while suicidal young men perceive their parents as distant and passive. Meneese, Yutrzenka, and Vitale (1992) reported a similar finding for a general high school sample. Not surprisingly, suicidal young people perceive themselves to lack supportive relationships, both within their families (Asarnow & Carlson, 1988; Rudd, 1990) and more generally (D'Attilio, Campbell, Lubrold, Jacobson, & Richard, 1992).

Finally, suicidal ideation and attempts are common sequelae of childhood physical and sexual abuse, particularly abuse perpetrated by family members (for reviews, see Beitchman, Zucker, Hood, DaCosta, Akman, & Cassavia, 1992; Briere, 1992; Browne & Finkelhor, 1986). Among psychiatric inpatients, for example, adolescents (Shaunesey, Cohen, Plummer, & Berman, 1993) and adults (van der Kolk, Perry, & Herman, 1991) with a history of childhood physical or sexual abuse evidence elevated levels of both current suicidal ideation and past suicide attempts, compared to their non-abused counterparts. Moreover, Stone (1992) reported that suicidal behavior in adolescents and adults diagnosed with borderline personality disorder is more strongly associated with a history of incest than with a history of physical abuse by parents. From their longitudinal study of the childhood origins of a range of self-destructive behaviors in adults with psychiatric disorders, van der Kolk and his colleagues (1991) concluded that childhood trauma fosters the inception of self-destructive behaviors, including suicide attempts, while the enduring inability to form satisfying relationships later in life maintains them.

Depression, Aggression, and Suicide

Psychoanalytic theorists considering suicide emphasize, in addition to early loss, the central role of depression and aggression in suicide, as both etiologic and precipitating factors. Researchers have investigated the prevalence of depression and aggression among suicidal individuals with mixed, although primarily confirmatory, results.

Depression and suicide have been linked consistently in the empirical and theoretical literature. Not surprisingly, most suicidal young people manifest significant depressive symptoms (Asarnow & Carlson, 1988; Brent et al., 1993; deWilde, Kienhorst, Diekstra, & Wolters, 1993; Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983; Lewinsohn et al., 1993; Pfeffer, Klerman, Hurt, Kakuma, Peskin, & Siefker, 1993; Rudd, 1990). Some researchers have found suicidal behavior to be more strongly associated with hopelessness than with depression (Beck, Kovacs, & Weissman, 1975; Dyer & Kreitman, 1984; Kazdin et al., 1983; Salter & Platt, 1990), while others report the opposite relationship among adolescents (Cole, 1989; Meneese, Yutrzenka, & Vitale, 1992). Furthermore, it has proven difficult to distinguish young people who are depressed from those who are both depressed and suicidal. One study of a community sample, for example, revealed similar levels of depression, hopelessness, low self-esteem, tolerance for suicide, and negative life events in both depressed and suicidal-depressed adolescents; in fact, the two groups were strikingly similar on a host of psychosocial variables (deWilde et al., 1993). Conversely, Lewinsohn and his colleagues (1993) found that, compared to depressed youngsters who are not suicidal, suicidal adolescents evidence greater levels of current depression and previous psychopathology; they concluded that suicidal behavior is largely an expression of severe depression.

Despite the frequent association of depression with suicide, some researchers have found a subset of suicidal young people to be both less depressed and more aggressive, hostile, and impulsive than their non-suicidal counterparts (Apter, Bleich,

Plutchik, Mendelsohn, & Tyano, 1988). In their study of young adolescent psychiatric inpatients, Apter and his colleagues (1988) found patients diagnosed with conduct disorder to be both more suicidal and less depressed than those with major depressive disorder. These authors noted that conduct disordered young people who attempt suicide frequently deny depression; their suicidal behaviors are impulsive attempts to relieve frustration and aggressive tension. Similarly, Brown, Overholser, Spirito, and Fritz (1991) found that adolescents who make impulsive suicide attempts are less depressed and hopeless than those who make premeditated attempts, despite the fact that premeditated and impulsive attempts reflect similar potential lethality. Clearly, the relationships among depression, aggression, and suicidality require further elucidation.

This brief perusal of the empirical literature suggests that suicidal young people do experience the disrupted and inappropriate early caretaking relationships hypothesized by psychoanalytic theorists; psychoanalytic postulates regarding the prevalence of depression and aggression among suicidal individuals have received tentative support as well. The precise relationships among these variables remain largely unspecified, however, and contradictory findings portend our imperfect understanding of youth suicide.

Assessment of Object Relations

Object relations theory suggests a mechanism by which early experiences prejudice one's later functioning, and may provide an important link between caretaking disruptions in childhood and suicidal ideation in early adulthood. However, no empirical study that examines associations between object relations and suicidality

has been reported in the psychological literature. This is not surprising, since the measurement of object relations, a theoretical, partly unconscious, multi-dimensional, enduring and pervasive aspect of personality, presents a formidable methodological challenge to empirical research. In clinical settings, object relations are typically assessed using projective techniques which are comprised of ambiguous stimuli and consequently elicit responses that reflect underlying personality dynamics, motivations, unconscious conflicts, and ego defenses (Bellak, 1993; Groth-Marnat, 1990). The Thematic Apperception Test (TAT; Murray, 1943), for example, ranks among the preferred clinical assessment instruments due to the rich data it yields (Bellak, 1993; Groth-Marnat, 1990). The TAT is often used in clinical settings to assess object relations; however, critics of the TAT point to the lack of objective, psychometrically sound criteria for assessing TAT responses as seriously limiting its usefulness for research.

The Social Cognition and Object Relations Scale (SCORS)

Recently, a promising method for the objective assessment of object relations from TAT stories has been developed. The Social Cognition and Object Relations Scale (SCORS; Westen, 1990a), based on an integration of object relations theory and social cognition theory, enables assessment of four dimensions of representations of people and expectations of interpersonal relationships. The Complexity of Representations of People scale measures the complexity, differentiation, and integration of self and other representations. The Affect Tone of Relationship Paradigms scale assesses the affective valence of people and relationships, from malevolent and threatening to benevolent and

nurturing. The Capacity for Emotional Investment in Relationships and Moral Standards scale rates the level of moral development and the extent to which interpersonal relationships are seen as means rather than ends. The Understanding of Social Causality scale assesses the extent to which attributions of others' actions, thoughts, and feelings are logical, accurate, complex, and psychologically sophisticated. Each scale is rated from 0 (immature, primitive, psychotic) to 5 (mature, healthy, sophisticated); Appendix A contains a detailed description of the SCORS coding scheme.

Validation of the SCORS

Efforts to validate the SCORS have been quite vigorous and have proceeded along three distinct lines. First, the ability of the SCORS to detect developmental differences in object relations predicted by both social cognition and object relations theory has been explored. Object relations theory predicts that complexity of representations, capacity for emotional investment, and understanding of social causality increase with age, while affect tone of relationship paradigms does not. The SCORS has been shown to detect these hypothesized developmental differences between normal children and adolescents (Westen, Klepser, Ruffins, Silverman, Lifton, & Boekamp, 1991), and between psychiatrically hospitalized adolescents and adults (Westen, Ludolph, Silk, Kellam, Gold, & Lohr, 1990).

The second line of validation has demonstrated the SCORS' ability to detect theoretically hypothesized differences in object relations among diagnostic groups. Borderline object relations are characterized by poorly differentiated representations of

people, a view of others as malevolent, a diminished capacity to invest emotionally in relationships, and a tendency to attribute inaccurately people's motivations (Westen, 1990b). Adults diagnosed with borderline personality disorder have been discriminated from both depressed and normal adults based upon characteristics of their object relations as measured by the SCORS (Westen, Lohr, Silk, Gold, & Kerber, 1990). Similarly, object relations of adolescents with borderline personality disorder have been found to differ from those of both psychiatric controls and normal adolescents (Westen, Ludolph, Lerner, Ruffins, & Wiss, 1990). Contrary to object relations theory, however, borderline adolescents in this study did not manifest more simplistic or undifferentiated representations of others. Finally, in a comparison of clinical psychology and natural science graduate students (Westen, Huebner, Lifton, Silverman, Boekamp, 1991), the former manifested more mature, psychologically sophisticated understanding of personality and motivation, as predicted; the groups did not differ with respect to the affect tone of interpersonal relationships, also as predicted. The authors suggest that the complexity of representations scale is related to psychological-mindedness, while the understanding of social causality scale is more closely associated with psychopathology, especially among normal subjects.

The third approach to validation of the SCORS, of particular importance for this investigation, has involved an examination of experiential correlates of object relations. An exploratory study of psychiatrically hospitalized adolescent girls (Westen, Ludolph, Block, Wixom, & Wiss, 1990) found several deleterious early experiences, including sexual abuse, maternal psychiatric illness, maternal alcohol abuse, prolonged

separations from the mother, and multiple maternal surrogates, to be differentially related to distinct dimensions of object relations as measured by the SCORS. Surprisingly, a few of the relationships in this exploratory study were not in the predicted direction. For example, subjects who had experienced grossly inappropriate parenting obtained higher scores on the complexity scale than those who had not. In addition, subjects with a history of maternal physical abuse were more likely than others to have high level responses on the complexity scale.

It is important to note that the vast majority of subjects in these SCORS validation studies were female; in fact, all of the psychiatric samples were predominantly if not exclusively female. Nevertheless, those studies conducted with normal samples, which have included a significant proportion of male subjects (i.e., Westen, Huebner, et al., 1991; Westen, Klepser, et al., 1991), have not revealed gender differences on the SCORS.

Purpose of the Study

The purpose of this study was to elucidate the pathways to suicidal ideation in young adulthood by examining the role of object relations as mediator between significant childhood experiences and suicidal ideation in early adulthood. Particular characteristics of one's early life have been associated with suicidal ideation and suicide attempts in later life; these include experiences of emotional, physical, and sexual abuse; parental dysfunction; and lack of consistent, predictable contact with significant parental figures. Furthermore, both depression and aggression have been correlated with suicide ideation and attempts. The hypothesis that multi-dimensional object

relations mediate these relationships is depicted in Figure 1, which presents the causal model that was assessed in this investigation. The following hypotheses were proposed:

1. Each of six types of deleterious childhood experiences (emotional abuse, physical abuse, sexual abuse, mother's dysfunction, father's dysfunction, and inconsistency of contact with parents) leads to impairment in each of the four dimensions of object relations assessed by the SCORS (complexity of representations, affect tone of relationships, emotional investment in relationships, and understanding of social causality).
2. Greater impairment in each of the four dimensions of object relations leads to higher levels of depression and higher levels of aggression.
3. Higher levels of depression and higher levels of aggression lead to higher levels of suicidal ideation.

In addition to obtaining confirmation for the mediating role of object relations, a second aim of the study was to explore the precise relationships among these constructs. Indeed, it was anticipated that some paths hypothesized in the theoretical model would not be observed in the data, and that the observed relationships would vary in strength. Thus, answers to the following exploratory questions were sought:

1. Which deleterious early experiences exert effects on which distinct characteristics of object relations? For example, what are the particular effects of sexual abuse experiences on object relations? Do these effects differ from the effects of physical or emotional abuse, parental dysfunction, or inconsistent contact with parents?

2. What is the pattern of object relations associated with depression? What pattern of object relations leads to aggression? Do aggression and depression arise from similar or disparate internal object worlds?
3. What are the characteristics of object relations associated with prior suicide attempts? What is the relationship between prior suicide attempts and current suicidal ideation?

Structural equation modeling, described in detail below, was used both to assess the validity of the theoretical model and to explore the presence and magnitude of the relationships within the model.

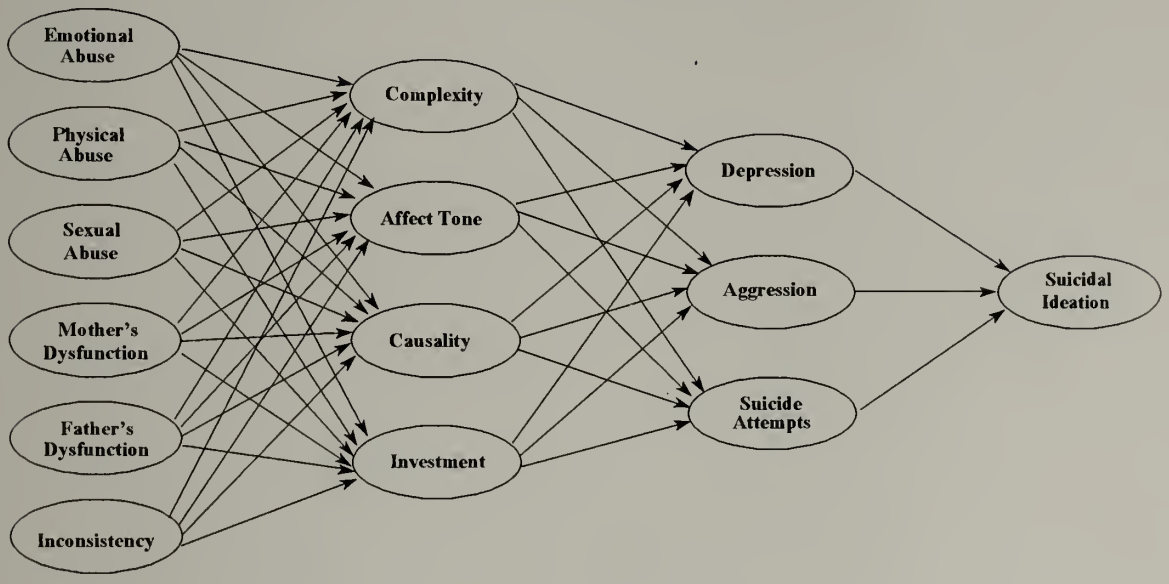

Figure 1. Hypothesized Latent Variable Model.
Ovals indicate latent constructs. Arrows indicate hypothesized directional paths. Indicator variables, covariances among exogenous constructs, and correlated error terms are not shown.

CHAPTER 2

METHOD

Subjects

Undergraduates enrolled in Psychology Department courses at the University of Massachusetts during the Spring 1994 semester constituted the subject pool for the study. A total of 252 subjects participated in the data collection. The 177 (70%) female and 75 (30%) male subjects ranged in age from 18 to 42 years; subjects' average age was 20.39 years (SD=2.60 years). The majority of subjects were single (95%), identified their racial or ethnic background as non-Hispanic White (82%), and described their primary sexual orientation as heterosexual (95%). Thirty percent of subjects reported that their parents had been or were currently separated; almost 24% of subjects' parents were divorced. Over half of the subjects (53%) were Psychology majors.

Subjects received two units of experiment-participation credit from the Psychology Department. American Psychological Association guidelines for the ethical use of human subjects in psychological research were strictly followed.

Instruments

Several standard clinical and research instruments were used in the study, as well as the Early Experiences Questionnaire and the Suicide Attempt Questionnaire devised by the experimenter. Each measure is described below.

Thematic Apperception Test

The Thematic Apperception Test (Murray, 1943) is a projective personality test comprised of 20 ambiguous scenes for which subjects create stories; typically, between 8 and 12 cards are administered (Bellak, 1993). Several of the cards have both male and female forms, however the responses these elicit are not strictly equivalent (Bellak, 1993; Groth-Marnat, 1990).

Ten TAT cards were administered to each subject. These cards, described in Appendix B, were chosen because they tend to elicit stories that reflect global personality dynamics and interpersonal themes, according to Bellak (1993). Because several of the male and female equivalent pairs have been found to evoke different themes (Worchel, Aaron, & Yates, 1990), and because gender discrepancy between the subject and the main character depicted in a picture appears to have little effect on responding (Katz, Russ, & Overholser, 1993), the identical sequence of TAT cards was administered to all subjects.

TAT instructions have been found to influence the validity of the test; instructions that minimize the evaluative function of the TAT and encourage the use of imagination in story-telling are more likely to invite openness and to discourage defensiveness (Lundy, 1988). The instructions used in this investigation were similar to Murray's (1943) standard instructions for adolescents and adults, except that reference to the procedure as a "test" was omitted; the instructions used for the study appear in Appendix B.

The TAT was administered in a group format. Each TAT card was projected onto a screen for five minutes, during which time subjects wrote down their stories. Smith, Feld, and Franz (1992) report that researchers of thematic apperceptive stories typically employ this type of group administration format. Although few researchers have compared the products of individual and group administrations, available evidence suggests that the stories elicited by each method are quite similar (Eron & Ritter, 1951; Lindzey & Heinemann, 1955; Murstein, 1963); however, some differences in achievement motivation have been noted (Teevan, Greenfield, & Smith, 1982). To compensate for the inability to prompt subjects for missing story elements in the group administration, the TAT Story Form on which subjects wrote their stories (see Appendix C) included a reminder of each of the components to be included in the story. Subjects were also verbally reminded to include these elements as each new card was displayed.

A pilot study of the group administration procedure was conducted in March 1994 with 12 volunteers from the undergraduate subject pool, who received experiment-participation credit. Based on prior experience with the TAT, the experimenter concluded that the group administration yielded stories of similar length and complexity to those typically elicited using the standard individual administration in this population. In addition, some subjects suggested that, compared to the individual administration described to them by the experimenter, the anonymity afforded by the group administration seemed more likely to encourage creativity and to discourage self-censure.

The experimenter and a research assistant independently coded the TAT stories using the SCORS; coders were blind to all other subject information. Before coding of research protocols began, reliability was estimated using Pearson *r* correlations of scores on sample TAT stories from the SCORS manual. Uncorrected correlations of raters' scores on these sample stories were .83 for Complexity, .85 for Affect Tone, .86 for Investment, and .89 for Causality. These estimates are within the range of uncorrected reliability estimates reported by Westen (1990a). Furthermore, correlations between each rater's scores and the scores provided in the manual were calculated; these correlations ranged from .78 to .91 across the two raters and four scales. Thus, adequate reliability of SCORS coding was achieved. In addition, research protocols were periodically scored by both raters to ensure maintenance of adequate reliability and to eliminate coder drift.

Standardized Self-report Measures

Four standardized self-report instruments that assess aspects of current functioning were completed by the subjects. These were the Adult Suicide Ideation Questionnaire, the Beck Depression Inventory, the Hopelessness Scale, and the Aggression Questionnaire.

The Adult Suicide Ideation Questionnaire (ASIQ; Reynolds, 1991a) is a 25-item self-report instrument that measures frequency and severity of suicidal ideation; each item reflects a suicide- or death-related thought that is rated on a 7-point Likert scale. The ASIQ has demonstrated high internal consistency (alpha=.97) and two week retest reliability (alpha=.86) in a large sample of undergraduates (Reynolds, 1991b), and has

been shown to discriminate depressed from non-depressed psychiatric patients; those who have made prior suicide attempts obtain higher scores on the ASIQ (Reynolds, 1991a). Its progenitor, the Suicide Ideation Questionnaire (Reynolds, 1989) has been used extensively in research with adolescents, and has proven particularly useful for measuring suicidal ideation in non-clinical populations (Eyman, Mikawa, & Eyman, 1990).

The Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979) is a widely used self-report measure of depression in adolescents and adults, with proven psychometric properties. In a review of 25 years of research with the BDI, Beck, Steer, and Garbin (1988) found that, for non-patient samples, the mean internal consistency estimate is 0.81, and retest reliability ranges from 0.60 to 0.83.; evidence for construct, concurrent, discriminant, and construct validity is considerable. Among adolescents, the BDI has been found to discriminate those with depressive disorders in samples of psychiatric inpatients and outpatients (Ambrosini et al., 1991; Kashani, Sherman, Parker, & Reid, 1990; Marton, Churchard, Kutcher, & Korenblum, 1991), and non-patient high school students (Roberts, Lewinsohn, & Seeley, 1991). Consequently, the BDI is considered a useful screening tool for depressive symptoms in young adults.

The Hopelessness Scale (HS; Beck, Weissman, Lester, & Trexler, 1974) measures affective, motivational, and cognitive manifestations of negative expectancies for the future. The HS is highly internally consistent, discriminates future suicides from non-suicides, is correlated with other measures of hopelessness, including clinical

ratings and other self-reports, and is sensitive to change over time (Beck et al., 1974). In a recent study involving almost 1000 subjects, the HS was found to provide a uni-dimensional measure of hopelessness, with strong item-construct relationships (Young, Halper, Clark, & Scheftner, 1992). Among university undergraduates, the HS has demonstrated substantial test-retest reliability and individual item stability (Holden & Fekken, 1988).

The Aggression Questionnaire (AQ; Buss & Perry, 1992) is a recent revision of the Buss-Durkee Hostility Inventory (Buss & Durkee, 1957), a popular self-report measure of aggression. The AQ is comprised of four factor-analytically derived scales that assess different components of aggression; the Physical Aggression and Verbal Aggression scales measure the behavioral component, the Anger scale measures the affective component, and the Hostility scale measures the cognitive component of aggression. The scales have adequate internal consistency, with alpha coefficients ranging from .72 to .89, and test-retest reliability ranging from .72 to .80; preliminary evidence for its construct validity has been assessed using a peer nomination method (Buss & Perry, 1992).

Early Experiences Questionnaire

The Early Experiences Questionnaire (EEQ; see Appendix D) is a self-report measure developed by the experimenter for this study. The EEQ queries subjects' early experiences of caretaking, particularly disruptions and separations from caretakers, as well as potentially problematic characteristics of primary caretakers, including psychiatric illness, substance abuse, incarceration, aggression, and suicidality. In

addition, the EEQ inquires about subjects' experiences of physical, sexual, and emotional abuse before the age of 16. To the extent possible, both objective and subjective aspects of subjects' experiences are assessed. For example, subjects indicate the frequency and duration of childhood abuse experiences, as well as the level of emotional or psychological distress they experienced as a result of these experiences.

Suicide Attempt Questionnaire

The Suicide Attempt Questionnaire (SAQ; see Appendix E), devised by the experimenter, assesses history of suicide attempts, including the number of prior attempts and characteristics of the most recent attempt, such as the subject's age at the time of the attempt, the method used, the reason for attempt, and its consequences. The SAQ includes a self-report version of the Suicide Intent Scale (SIS; Beck, Beck, & Kovacs, 1975) that was also developed for this study. The SIS is widely used in research and clinical settings (Pfeffer, 1986) to assess the lethality of suicide attempts using both objective and subjective criteria, with a separate scale for each. One scale measures objective characteristics of the attempt, such as the presence of a suicide note, advance preparations for the attempt, and precautions to avoid discovery and intervention; the other scale measures the subject's personal evaluation of the lethality of the act, including whether the subject expected to and wished to die. The standard SIS, which is completed by a clinician following a structured interview, has proven psychometric properties (Pfeffer, 1986; Beck et al., 1975), and is considered a valuable measure of suicide lethality and intent (Garrison, Lewinsohn, Marsteller, Langhinrichsen, & Lann, 1991). For this study, subjects who reported one or more

suicide attempts completed the self-report version of the SIS to describe the most recent suicide attempt.

Procedure

Subjects attended a two hour group testing session during which all data were collected. First, subjects read and signed the informed consent form; questions were solicited and answered. Then the TAT was administered as described above. Next, subjects completed the six self-report measures in the following order: EEQ, SAQ, ASIQ, BDI, HS, AQ. The self-report scales were administered following completion of the TAT to avoid contamination of the projective test (Lundy, 1985). Finally, subjects received information about the purpose of the study and the written feedback form. Experiment-participation credits were dispersed at the close of the two hour data collection session.

Data Analyses

Structural equation modeling (SEM), also known as covariance structure analysis and latent variable path analysis, was used to assess the extent to which the observed data were explained by the theoretical model depicted in Figure 1.

Overview of Structural Equation Modeling

The theoretical model for this study is a latent variable model, which consists of a structural model portion and a measurement model portion. The latent variable model postulates directional paths, known as structural parameters, between unobserved or latent theoretical constructs; each latent construct is measured by several observed or manifest indicator variables which comprise the measurement portion of the model.

SEM accounts for the fact that all latent constructs and their indicator variables are measured with error, unlike more traditional multivariate analyses, such as regression, that assume variables to be measured without error (Bollen, 1989). This SEM capability allows error terms for both indicators and constructs to be modeled separately from the indicators and constructs themselves.

SEM techniques utilize a minimization function to compute the covariance matrix that is predicted from the hypothesized model. The most common minimization functions, the maximum likelihood and generalized least squares functions, assume that the distribution of indicator variables is multivariate normal. When this assumption is violated, estimates of path coefficients and factor loadings have been found to be quite stable, even at smaller sample sizes (Bollen, 1989; Hu, Bentler, & Kano, 1992); however, the overall chi-square and significance tests of the estimated parameters tend to be too low. Other minimization functions, such as the asymptotic distribution free function (ADF, Browne, 1984), have been developed, but these have been found to work poorly at smaller sample sizes (Bollen, 1989; Hu et al., 1992).

As in most studies of real-life phenomena, the indicator variables in the present study violate the assumption of multivariate normality. However, because the sample size is relatively small by SEM standards, the ADF function could not be used. To minimize multivariate kurtosis, very highly skewed or kurtotic variables were either excluded from the analyses or transformed. Because the generalized least squares function makes less stringent assumptions about multivariate normality than the more commonly used maximum likelihood function (Bollen, 1989) and because it has been

found to perform well with kurtotic indicators and smaller sample sizes (Hu et al., 1992), it was utilized in the analyses. A visual comparison of the maximum likelihood and generalized least squares functions on a simplified version of the model revealed no substantive differences.

Indices of Model Fit

SEM calculates the difference between the predicted covariance matrix and the observed covariance matrix, i.e., the covariances obtained from the data. A chi-square statistic of this difference is computed to test the null hypothesis that the model fits the data. Thus, a non-significant chi-square suggests adequate model fit. A significant chi-square indicates that the observed and predicted covariance matrices differ, and that the model does not adequately reflect the covariances in the data. Because the chi-square statistic is highly sensitive to small sample size and departures from multivariate normality (Bollen, 1989), alternative goodness of fit indices have been developed to augment the chi-square test as a measure of overall model fit. Gerbing and Anderson (1993) suggest that multiple fit indices be reported when analyzing covariance structure models, as there is no single accepted goodness of fit index. Consequently, in addition to the overall model chi-square, several fit indices are reported for the measurement and structural models. These fit indices are described below.

A commonly used incremental fit index is Bollen's (1989) Non-normed Index Delta2, which compares the fit of the model of interest to the fit of a baseline or "null" model that places no restrictions on covariances to be estimated. Delta2 improves upon Bentler and Bonnett's (1980) popular NFI by correcting for NFI's downward bias with

small sample sizes. Two useful measures of goodness of fit based on the non-centrality parameter are Bentler's (1990) Comparative Fit Index (CFI) and McDonald's (1989) Centrality Index. For all of these indices, higher values indicate better fitting models, with values above .90 reflecting good model fit (Bollen, 1989).

The chi-square statistic tests the null hypothesis that there is an *exact* fit between the predicted and observed covariance matrices, a very rigorous condition that is often implausible in practice. Browne and Cudeck (1993)'s Probability of Close Fit tests the null hypothesis that the root mean square error of approximation (RMSEA) is less than or equal to 0.05. Another alternative to the chi-square statistic is the elliptical corrected chi-square; the chi-square estimate is divided by Mardia's index of relative multivariate kurtosis to correct for inflation due to non-normality. Finally, it is desirable to assess the parsimony of the structural model, that is the relation between the fit of the model and its complexity. One useful measure is the Parsimonious Normed Fit Index (PNFI; James, Mulaik, & Brett, 1982); PNFI values above .60 reflect adequate parsimony (Netemeyer, Johnston, & Burton, 1990).

SEM Procedure

Anderson and Gerbing's (1988) two-step approach to SEM was followed for the data analysis. First, confirmatory factor analysis (CFA) was performed to assess the adequacy of the measurement models, that is to examine the relationships between the observed indicators and the theoretical constructs they measure. Because of the complexity of the model, the CFA was performed in multiple steps, as suggested by Joreskog (1993). A revised measurement model was used in the structural equation

modeling to assess the fit of the structural model to the data. The SAS System's CALIS procedure (SAS Institute Inc., 1989) was used to perform the confirmatory factor analysis and to analyze the covariance structure model.

CHAPTER 3

RESULTS

Descriptive Statistics and Gender Differences

Descriptive statistics for the study variables and the results of various tests of gender differences appear in Table 1 through Table 9. Table 1 presents the demographics of the sample.

A complete data set was obtained for 220 of the 252 subjects who participated in the data collection; a portion of the self-report data was missing for 22 women and 10 men. Data were most often missing for variables related to abuse experiences reported on the EEQ, either because items were left blank or answers given were not useable. Separate chi-square tests indicated that, compared to subjects with complete data sets, subjects with missing data were more likely to report experiences of emotional abuse ($\chi^2=14.75$, df=1, $p=.000$), physical abuse ($\chi^2=3.92$, df=1, $p=.048$), and sexual abuse ($\chi^2=24.04$, df=1, $p=.000$). However, independent group t-tests comparing abused subjects with complete data to abused subjects with missing data revealed no significant differences on any abuse-related variable. Thus, although abused subjects were over-represented among those excluded from the analyses due to missing data, characteristics of abuse were consistent across all subjects.

Table 1. Demographic Characteristics of Subjects

	Number	Percent
Gender		
Men	75	29.8
Women	177	70.2
Race/Ethnicity		
White (non-Hispanic)	207	82.1
Asian-American	21	8.3
Hispanic, Latino/a	10	4.0
African-American	3	1.2
Other	11	4.4
Sexual Orientation		
Heterosexual	238	95.2
Bisexual	11	4.4
Homosexual	1	0.4
Major		
Psychology	133	53.2
Business, Accounting	19	7.6
Communications	15	6.0
Science, Math, Eng.	15	6.0
Humanities	12	4.8
Other Social Science	11	4.4
Education	7	2.8
Fine Arts	6	2.4
Other	15	6.0
Undeclared	17	6.8
Relationship Status		
Not in Relationship	132	52.4
Single, in Relationship	107	42.5
Living with Partner	11	4.4
Married	2	0.8
Parents Separated	76	30.2
Parents Divorced	60	23.8

Characteristics of Parental Figures

On the EEQ, subjects indicated their "most important female/male parental figure" and answered several questions regarding their perceptions of the identified person's difficulties. Thus, the "parent" about whom the dysfunction information was

obtained was not always a biological or custodial parent. Subjects' relationships to the identified male and female parental figures appear in Table 2. Ninety-four percent of the subjects identified their biological mothers as their most important female parental figure; 84.5% of subjects named their biological fathers as their most important male parental figure.

Table 2. Relationships to Most Important Male and Female Parental Figures

	Female Parent		Male Parent	
Relationship	**Number**	**Percent**	**Number**	**Percent**
Biological	237	94.0	213	84.5
Adoptive	4	1.6	4	1.6
Aunt/Uncle	4	1.6	2	0.8
Grandparent	3	1.2	9	3.6
Sister/Brother	2	0.8	5	2.0
Stepparent	1	0.4	9	3.6
Friend	0	0.0	6	2.4
Other	0	0.0	2	0.8
None	1	0.4	2	0.8
Total	252	100.0	252	100.0

Subjects indicated on separate 7-point Likert scales, ranging from 0 (not at all) to 6 (extreme), the extent to which the parental figure had experienced depression, psychiatric difficulty other than depression, alcohol use, drug use, suicidal ideation or behavior, aggression or violent behavior, incarceration, medical difficulties, and other difficulties. Incarceration was such a rare event that the variable was not included in the subsequent analyses. Because the frequency of reported substance abuse problems was small, the variables for alcohol and drug use were added together to create a single

measure of substance use. An additional variable measured the extent of harm subjects believed their parent's problems had caused them, from 0 (none) to 6 (extreme harm).

Table 3. Parental Dysfunction and Inconsistency of Contact with Parental Figures

	N	Mean	S.D.	Range	Kurtosis	Skew
Mother's Dysfunction						
Depression	251	1.95	1.64	0-6	-.24	.70
Suicidality	251	.32	.91	0-6	13.87	3.56
Alcohol Abuse	251	.49	1.16	0-6	8.16	2.78
Drug Abuse	251	.17	.60	0-4	22.62	4.54
Substance Abuse	251	.66	1.48	0-10	9.36	2.82
Aggression	250	.48	1.01	0-6	7.02	2.56
Incarceration	251	.04	.41	0-6	186.11	13.13
Medical Problems	251	.96	1.54	0-6	1.90	1.64
Other Psychiatric	249	.49	1.21	0-6	6.96	2.70
Other Problems	251	.53	1.43	0-6	5.90	2.66
Perceived Harm	251	1.31	1.54	0-6	.75	1.19
No. Hospitalizations	250	.12	.65	0-7	60.71	7.13
Father's Dysfunction						
Depression	250	1.33	1.62	0-6	.81	1.21
Suicidality	250	.31	.97	0-6	17.96	4.06
Alcohol Abuse	250	1.06	1.65	0-6	1.16	1.50
Drug Abuse	250	.26	.82	0-6	18.66	4.06
Substance Abuse	250	1.32	2.13	0-10	2.82	1.82
Aggression	250	.90	1.50	0-6	2.53	1.78
Incarceration	249	.05	.27	0-2	37.53	5.99
Medical Problems	250	.92	1.70	0-6	2.46	1.88
Other Psychiatric	248	.35	1.10	0-6	14.54	3.76
Other Problems	250	.28	1.14	0-6	16.70	4.18
Perceived Harm	250	1.48	1.85	0-6	.13	1.13
No. Hospitalizations	247	.08	.54	0-6	81.69	8.69
Inconsistency of Contact with Parents						
Living Situations	252	1.43	.99	1-9	16.66	3.48
% Life Parents Separated	249	.14	.28	0-99	2.04	1.88
Trauma of Parents' Divorce	252	.79	1.61	0-7	3.60	2.08
Trauma of Parent's Death	252	.22	1.07	0-7	25.64	5.11
Mother Important*	252	.53	.99	0-6	5.77	2.24
Father Important*	252	.98	1.43	0-6	1.56	1.47

*Lower scores indicate greater importance.

Dysfunction ratings for parental figures were quite disparate across categories; descriptive statistics for these variables appear in Table 3. The median and mode for the dysfunction variables were very low, and zero in most cases. To examine the prevalence of perceived parental dysfunction, frequencies of non-zero ratings, indicating the presence of the dysfunction without respect to its magnitude, were examined. Depression was the most commonly cited dysfunction of both male and female parents; 54.4% of fathers and 77.3% of mothers were rated as having experienced some level of depression. Fourteen percent of fathers and almost 16% of mothers had evidenced suicidal ideation, threats, or gestures, as perceived by the subjects. Serious medical difficulties troubled 30.8% of fathers and 37.1% of mothers, and aggression characterized 34.8% of male and 24.8% of female parental figures. Incarceration was the least common parental problem; only 3.6% of fathers and 1.6% of mothers had been incarcerated, according to the subjects. Two multivariate ANOVA tests examining dysfunction ratings for biological parents compared to other identified parental figures were performed. Dysfunction ratings for biological mothers and non-biological mother figures did not differ significantly ($F(8,237)=1.35$, NS). Significant differences, presented in Table 4, were obtained for male parental figures. Subjects rated biological fathers as having significantly more difficulties than non-biological father figures ($F(8,239)=3.32$, $p=.001$); univariate ANOVA tests revealed that biological fathers were rated as more aggressive and depressed than other father figures, and that the difficulties of biological fathers resulted in significantly more perceived harm to subjects.

Table 4. Perceived Dysfunction of Biological Fathers versus Other Father Figures

Variable	Biological Mean	Biological S.D.	Other Mean	Other S.D.	*F*	*p*
MANOVA					3.322	.001
Depression	1.68	1.42	.84	1.07	3.794	.053
Suicidality	1.02	.34	.14	.59	1.292	.257
Substance Abuse	2.10	1.32	1.32	2.35	.009	.926
Aggression	1.56	.99	.38	.92	4.952	.027
Medical Problems	1.57	.85	1.35	2.25	2.893	.090
Other Psychiatric	1.18	.40	.03	.16	3.698	.056
Other Problems	1.15	.28	.30	1.08	.004	.950
Perceived Harm	1.89	1.62	.70	1.35	8.032	.005

Note. MANOVA tests all dysfunction variables simultaneously. MANOVA df=8,239. Results of univariate ANOVA are reported for each dysfunction variable. ANOVA df=1,246.

Several variables, summarized in Table 3, measured inconsistency of contact with parental figures. These variables included measures of the percent of the subject's life his or her parents were separated or divorced, extent of trauma from parental divorce ranging from 0 (not divorced) to 7 (extreme trauma), the extent of trauma from parental death ranging from 0 to 7, and the number of living situations a subject had experienced. A living situation was defined as any change in caretakers with whom a subject lived before the age of 18. For example, a subject who lived with both parents prior to a divorce and with his or her mother alone following the divorce would have had two living situations. Also, subjects were asked about the "importance" of the identified female and male parental figures; these variables were reverse scored, so that 0 reflected the highest and 6 the lowest level of importance to the subject. Most subjects (76.6%) had lived with only one set of caretakers before the age of 18; in the

majority of cases, these caretakers were the subjects' biological parents. Parental death was a rare event in the sample; only 12 subjects (4.8%) reported the death of a parent.

Emotional, Physical, and Sexual Abuse Experiences

Several characteristics of emotional, physical, and sexual abuse experienced before the age of 16 were queried: duration of abuse in years; frequency of abuse, ranging from 0 (never) to 5 (daily); number of perpetrators; relationship to perpetrators; perceived extent of psychological harm from the abuse, ranging from 0 (no abuse reported) to 7 (extreme harm); and, for sexual abuse, the extent to which the subject was coerced to participate in the sexual activity, from 0 (no abuse reported) to 7 (extreme coercion). These variables are presented in Table 5.

Table 5. Characteristics and Gender Differences for Reported Abuse Experiences

Variable	**N**	**Mean**	**S.D.**	**Range**	***F***	**df**	***p***
Emotional Abuse					4.756	4,65	.002
Frequency	76	3.33	1.17	1-5	4.828	1,68	.031
Men	18	2.83	1.04				
Women	58	3.48	1.17				
Duration (years)*	72	11.12	5.54	0-21	.386	1,68	.536
Men	17	12.38	5.33				
Women	55	10.73	5.60				
No. Perpetrators	72	1.71	1.12	1-6	3.559	1,68	.064
Men	16	2.19	1.64				
Women	56	1.57	.89				
Harm	75	4.33	1.80	1-7	9.924	1,68	.002
Men	18	3.17	1.79				
Women	57	4.70	1.66				
Physical Abuse					2.295	4,36	.078
Frequency	43	2.93	1.06	1-5	2.223	1,39	.144
Men	12	2.50	1.00				
Women	31	3.10	1.04				

Continued next page.

Table 5, continued.

Variable	N	Mean	S.D.	Range	*F*	df	*p*
Duration (years)*	42	8.95	4.70	0-17	.319	1,39	.576
Men	12	9.83	3.43				
Women	30	8.60	5.12				
No. Perpetrators	42	1.60	.94	1-5	.228	1,39	.636
Men	11	1.73	.65				
Women	31	1.55	1.03				
Harm	43	3.67	2.01	1-7	7.151	1,39	.011
Men	12	2.42	1.78				
Women	31	4.16	1.90				
Sexual Abuse					.628	5,22	.680
Frequency	33	2.42	1.30	1-4	.094	1,26	.761
Men	3	2.00	1.73				
Women	30	2.45	1.28				
Duration (years)*	30	2.37	3.27	0-14	.016	1,26	.901
Men	3	2.00	3.46				
Women	27	2.41	3.30				
No. Perpetrators	34	1.79	1.55	1-6	.743	1,26	.397
Men	3	1.00	.00				
Women	31	1.87	1.61				
Harm	33	4.67	2.07	1-7	1.823	1,26	.189
Men	3	3.00	2.65				
Women	30	4.83	1.98				
Coercion	31	4.74	2.18	1-7	2.794	1,26	.107
Men	3	3.00	1.00				
Women	28	4.93	2.19				

*For subjects who reported a single incident of abuse, duration was set equal to 0 years.
Note. MANOVA results are reported for each type of abuse. Results of univariate ANOVA are reported for each abuse variable.

A significant proportion of the total sample reported having experienced some type of abuse; 30.8% reported emotional abuse, 17.2% reported physical abuse, and 13.8% reported sexual abuse. Overall, 100 subjects (39.7%) reported that they had experienced at least one type of abuse. The mean reported duration of emotional, physical, and sexual abuse was 11.12, 8.95, 2.37 years respectively. Subjects reported

that emotional and physical abuse experiences occurred, on average, approximately once a month; sexual abuse experiences were less frequent. Most subjects reported between one and two perpetrators of each type of abuse. In every case of reported physical and emotional abuse, the perpetrators of the abuse included at least one parent; 54.8% of the sexually abused subjects reported abuse by a parent, sibling, or other relative. There was great variability in the extent to which subjects believed they had been psychologically harmed by these abuse experiences; however, mean harm ratings for each type of abuse hovered around the middle of the 7-point scale, indicating that subjects believed the experiences had caused them "quite a bit" of harm.

Gender differences in reported abuse experiences were anticipated; chi-square and multivariate ANOVA tests were used to assess these differences. The results of separate chi-square tests of these gender differences appear in Table 6. Compared to men, women were more likely to report sexual abuse ($\chi^2=8.14$, df=1, $p=.004$) but not emotional abuse ($\chi^2=1.82$, df=1, NS) or physical abuse ($\chi^2=.07$, df=1, NS). Table 5 includes the results of a multivariate ANOVA test comparing abused women and men on characteristics of physical, emotional, and sexual abuse. Significant results were obtained for emotional abuse ($F(4,65)=4.76$, $p=.002$), but not for physical ($F(4,36)=2.30$, NS) or sexual ($F(5,22)=.63$, NS) abuse. Univariate ANOVA tests revealed that women reported emotional abuse of greater frequency and perceived harmfulness than men. Although no significant gender differences were observed for the sexual abuse variables among subjects who reported sexual abuse experiences, the

rarity of sexual abuse reported by men in this sample makes it difficult to draw conclusions about gender differences.

Table 6. Gender Differences in Reported Abuse and Attempted Suicide

	N	Number	Percent	χ^2	*p*
Emotional Abuse	247	76	30.8	1.817	.178
Men	73	18	24.7		
Women	174	58	33.3		
Physical Abuse	250	43	17.2	.071	.789
Men	74	12	16.2		
Women	176	31	17.6		
Sexual Abuse	247	34	13.8	8.139	.004
Men	73	3	4.1		
Women	174	31	17.8		
Attempted Suicide	249	40	16.1	4.943	.026
Men	74	6	8.1		
Women	177	34	19.4		

Note. χ^2 df=1.

Reported Suicide Attempts

Descriptive statistics for characteristics of suicide attempts are found in Table 7. Forty subjects (16.1%), 34 women and 6 men, reported having made at least one suicide attempt; this rate falls at the high end of the estimated prevalence range of suicide attempts by college students, which is between 4% and 15% (McIntosh, Hubbard, & Santos, 1985). The mean number of attempts for these subjects was 1.68 (SD=1.05) and the average age of the most recent attempt was 15.72 years (SD=2.78). Reported suicide attempts were typically mild in lethality, and most subjects reported receiving no medical or psychological treatment following the attempt. In fact, many subjects reported that their attempts went undiscovered by

others. Women were more likely than men to report a history of suicide attempts (see Table 6; $\chi^2=4.94$, df=1, $p=.026$). However, the multivariate ANOVA test summarized in Table 7 reveals that gender differences in characteristics of attempted suicide were only marginally significant ($F(4,34)=2.75$, $p=.044$), and none of the univariate ANOVA tests for individual suicide attempt variables reached significance.

Table 7. Characteristics of Reported Suicide Attempts

Variable	**N**	**Mean**	**S.D.**	**Range**	*F*	*p*
MANOVA					2.751	.044
No. Attempts	40	1.68	1.05	1-5	.817	.372
Men	6	1.33	.82			
Women	34	1.74	1.08			
Age at Last Attempt	39	15.72	2.78	10-25	.554	.461
Men	6	16.50	4.23			
Women	33	15.58	2.50			
SIS Objective	39	7.13	2.61	0-14	1.129	.295
Men	6	8.17	3.06			
Women	33	6.94	2.52			
SIS Subjective	39	5.77	3.75	0-12	3.533	.068
Men	6	8.33	4.59			
Women	33	5.30	3.46			

Note. MANOVA tests all suicide variables simultaneously. MANOVA df=4,34. Results of univariate ANOVA are reported for each variable. ANOVA df=1,37.

Self-report Measures and Object Relations Scales

Table 8 lists descriptive statistics for the four standardized self-report measures. Means and standard deviations for these measures were within the expected ranges for a non-patient, college sample. The mean BDI score was 8.0, which indicates the presence of "minimal" depressive symptoms in the sample; the mean HS score of 3.7 also fell in the "minimal" range. A multivariate ANOVA revealed significant gender differences in

scores on the self-report measures; univariate ANOVA indicated that men obtained higher scores than women on the Physical Aggression scale of the Aggression Questionnaire, although the magnitude of the difference was small.

Table 8. Descriptive Statistics and Gender Differences for Self-report Measures

	N	Mean	S.D.	Range	*F*	*p*
MANOVA					4.674	.000
ASIQ T score	244	50.49	11.22	42-131	.355	.552
Men	74	49.80	10.07	42-93		
Women	170	50.79	11.70	42-131		
BDI score	252	8.01	7.60	0-38	2.559	.111
Men	75	6.75	6.49	0-32		
Women	177	8.55	7.98	0-38		
HS score	252	3.71	4.01	0-20	.458	.499
Men	75	3.95	3.97	0-20		
Women	177	3.61	4.03	0-20		
AQ Anger scale	251	16.22	5.86	7-34	.0212	.884
Men	74	16.28	6.27	7-33		
Women	177	16.19	5.69	7-34		
AQ Hostility scale	251	19.19	7.01	8-39	.114	.736
Men	74	19.31	7.22	8-39		
Women	177	19.14	6.94	8-39		
AQ Physical scale	251	19.11	7.24	9-44	12.380	.001
Women	177	18.11	6.92	9-41		
Men	74	21.51	7.47	9-44		
AQ Verbal scale	251	14.09	4.07	5-24	2.474	.117
Women	177	13.83	3.98	5-24		
Men	74	14.72	4.25	5-24		
AQ Total score	251	68.61	18.59	32-126		
Men	74	71.82	19.14	37-123		
Women	177	67.27	18.24	32-126		

Note. ASIQ = Adult Suicide Ideation Questionnaire. BDI = Beck Depression Inventory. HS = Hopelessness Scale. AQ = Aggression Questionnaire. MANOVA excludes AQ Total score. MANOVA df=7,235. Results of univariate ANOVA are reported for each variable. ANOVA df=1,241.

Multivariate ANOVA was used to determine whether there were gender differences in levels of object relations as measured by the SCORS. The results, presented in Table 9, revealed highly significant gender differences in mean scores for all four object relations scales, with women's scores exceeding men's on each scale.

Table 9. Gender Differences in Mean Object Relations Scores

Variable	**N**	**Mean**	**S.D.**	**Range**	*F*	*p*
MANOVA					8.345	.000
Complexity	252	2.79	.44	2.0-4.1	16.425	.000
Men	75	2.62	.41	2.0-3.5		
Women	177	2.86	.43	2.0-4.1		
Affect Tone	252	2.81	.44	1.5-4.0	7.151	.008
Men	75	2.70	.45	1.6-4.0		
Women	177	2.86	.42	1.5-3.8		
Causality	252	2.73	.52	1.1-4.3	24.014	.000
Men	75	2.49	.52	1.1-3.7		
Women	177	2.83	.49	1.7-4.3		
Investment	252	2.33	.43	1.1-3.4	27.391	.000
Men	75	2.13	.48	1.1-3.4		
Women	177	2.42	.38	1.3-3.4		

Note. MANOVA tests all object relations variables simultaneously. MANOVA df=4,247. Results of univariate ANOVA are reported for each variable. ANOVA df=1,250.

Results of the Structural Equation Modeling

Structural equation modeling was conducted with data from the 220 subjects, 155 women and 75 men, from whom a complete data set was obtained.

The Measurement Model

The initial measurement model included 14 latent constructs comprising 82 indicator variables. Assessment of the measurement model for each construct is described below.

Description and Analysis of the Latent Constructs. The Suicidal Ideation construct was measured by a single indicator, the ASIQ T score. Because this variable was both skewed and kurtotic, the natural logarithm of the ASIQ T score was used in the analyses. The Depression construct was measured by the Beck Depression Inventory (BDI) score and the Hopelessness Scale (HS) score. The Aggression construct was measured by the four scales of the Aggression Questionnaire: Physical Aggression, Verbal Aggression, Anger, and Hostility. The Suicide Attempt construct was measured by three indicators: number of suicide attempts the subject reported, SIS Objective scale score, and SIS Subjective scale score. Because attempted suicide was a rare event in this sample, the variable for number of suicide attempts was skewed and kurtotic. To minimize the skew, the square root of the variable was used in the analyses.

A confirmatory factor analysis (CFA) was performed with these four constructs to determine that each factor loading, which indicates the strength and direction of the relationship between the indicator and the construct it measures, was significant and in the predicted direction. All factor loadings were positive and highly significant at $p < .001$. However, the chi-square statistic was highly significant ($\chi^2 = 77.59$, df=30, $p < 0.0001$). Further, the Lagrange multiplier, a modification index provided by CALIS, revealed that adding a path from the Hostility scale indicator to the Depression construct would improve model fit significantly. Adding this path, however, would invalidate the use of the FC1 Rule (Davis, 1993) for identification of the measurement model by increasing the factor complexity of the Hostility indicator to two (see the

discussion of model identification below). Examination of the Hostility scale items revealed that they reflect negative attitudes about the interpersonal world, as opposed to the other three Aggression construct indicators, which relate principally to a subject's aggressive behavior and related affect. Because the Hostility scale items are quite similar to items on the BDI and HS, the Hostility indicator was removed from the Aggression construct and added to the Depression construct. With that modification, factor loadings remained highly significant and the chi-square statistic was reduced, although it remained significant (χ^2=48.28, df=30, p=0.02).

The four object relations constructs (Complexity, Affect Tone, Investment, and Causality) correspond to the four SCORS scales. Each of these constructs was measured by ten indicators, one for each TAT story a subject wrote. Each story was coded four times, once for each object relations scale; consequently, characteristics of a story that are unrelated to a subject's level of object relations, such as story length, could influence a subject's score on each scale for that story. Therefore, error terms for scores derived from the same card were allowed to covary across the four object relations constructs in the measurement model.

CFA using the four object relations constructs indicated that one variable, the Complexity score for TAT Card 15, had a non-significant factor loading. When this indicator was dropped from the analysis, all factor loadings were positive and highly significant at $p < .001$ and the non-significant chi-square indicated good model fit (χ^2=609.94, df=639, p=0.79).

Six constructs reflected characteristics of subjects' family environments and early experiences: Emotional Abuse, Physical Abuse, Sexual Abuse, Mother's Dysfunction, Father's Dysfunction, and Inconsistency. Indicators for these constructs were derived from subjects' responses on the self-report EEQ.

The three abuse constructs included indicators for characteristics of emotional, physical, and sexual abuse experiences: duration of abuse, frequency of abuse, and extent of psychological harm. The duration of sexual abuse indicator was transformed using the square root to reduce its skew and kurtosis. In addition, the Sexual Abuse construct included an indicator of the extent to which the subject was coerced to participate in the sexual activity. It would have been desirable to include an indicator of the number of reported perpetrators for each abuse construct; unfortunately, these variables were too highly skewed and kurtotic to include in the model.

Separate constructs measured the reported dysfunction of subjects' identified female and male parent. Each construct included indicators for ratings of the parent's perceived level of depression, psychiatric difficulty other than depression, substance use, suicidal ideation or behavior, aggression or violent behavior, medical difficulties, and other difficulties. An additional indicator measured the extent of harm subjects believed the parent's problems had caused them.

The Inconsistency construct measured inconsistency of contact with parental figures. It included indicators of the percent of the subject's life his or her parents were separated or divorced, extent of trauma from parental divorce, extent of trauma from

parental death, the number of living situations a subject experienced, and the importance of the identified female and male parental figures.

The six family characteristic constructs were included in a CFA to assess this portion of the measurement model. The CFA revealed that one variable, the Other Problems indicator for the Mother's Dysfunction construct, had a non-significant factor loading. When this indictor was eliminated from the analysis, all factor loadings were positive and significant ($p < .01$). However, the chi-square test was also significant ($\chi^2 = 874.29$, df$=419$, $p < 0.0001$). The CALIS modification indices indicated no changes that were both substantively and statistically appropriate.

The three partial measurement models were combined and tested using CFA. The CFA revealed that six additional indicators had non-significant factor loadings; these were the TAT Card 13MF indicator for the Complexity construct, the Substance Abuse and Other Psychiatric Difficulties indicators for the Mother's Dysfunction construct, the Substance Abuse indicator for the Father's Dysfunction construct, and the Parental Death and Importance of Mother indicators for the Inconsistency construct. These six indicators were eliminated sequentially from the analysis.

Psychometric Properties of the Final Measurement Model. Table 10 contains the fit indices for the final measurement model. The non-significant chi-square statistic indicates that the model fit the data adequately. The other fit indices support the adequacy of the measurement model as well. However, an examination of the asymptotically standardized residuals revealed several large positive residuals, most of which appeared on the diagonal of the covariance matrix.

Table 10. Fit Indices for the Final Measurement Model and the Structural Model

	Measurement Model	Structural Model
Model χ^2	2573.925	2620.259
df	2485	2516
p	0.1045	0.0722
Null Model χ^2	555661.160	555661.160
df	2701	2701
Corrected χ^2	2366.424	2409.023
Kurtosis	1.0877	1.0877
p	0.9954	0.9358
Prob. Close Fit	1.0000	1.0000
RMSEA	0.0128	0.0138
CFI	0.9998	0.9998
NFI	0.9998	0.9998
Delta2	0.9998	0.9998
Centrality Index	0.8170	0.7890
PNFI	0.9158	0.9271

Note. The eliptical corrected χ^2 uses the Relative Multivariate Kurtosis for correction. RMSEA = root mean square error of approximation. CFI = Comparative Fit Index. NFI = Normed Fit Index. PNFI = Parsimonious Normed Fit Index.

Table 11 contains the standardized factor loadings, indicator reliability estimates, composite reliability estimates, and variance extracted estimates for the 74 indicators and 14 constructs of the revised measurement model. All factor loadings were positive and significant at $p < .01$, providing support for the convergent validity of the indicators (Anderson & Gerbing, 1988). Indicator reliability, which is computed as the square of the standardized factor loading, measures the percent of variation in an indicator that is explained by the construct it measures (Long, 1983). Reliability estimates for the indicators were quite variable, and ranged from .06 to .98. The composite reliability of each construct is a measure of internal consistency, analogous to coefficient alpha (Hatcher, 1994). Composite reliability estimates were high, ranging

from .70 to .98. The variance extracted estimates (Fornell & Larcker, 1981) assess the amount of variance that is captured by the construct in relation to the error variance of the construct. The variance extracted estimates were in the range of .36 to .98, although most were above Fornell and Larcker's (1981) recommended minimum of .50. Taken together, the fit indices and reliability and validity estimates provide strong support for the adequacy of the measurement model, despite the presence of several large residuals on the diagonal of the predicted covariance matrix. Thus, the revised measurement model was retained and used to assess the structural model.

Table 11. Factor Loadings and Reliability Estimates for the Final Measurement Model

Construct and Indicators	**Standardized Factor Loading**	**Reliability**	**Variance Extracted**
Suicide Attempt		0.9578	0.9525
# Attempts	0.9518	0.9059	
SIS Objective	0.9697	0.9403	
SIS Subjective	0.8987	0.8076	
Depression		0.8982	0.8685
BDI	0.8828	0.7793	
HS	0.8822	0.7783	
Hostility	0.8277	0.6850	
Aggression		0.7590	0.6465
Physical	0.6753	0.4560	
Verbal	0.4601	0.2117	
Anger	0.9652	0.9316	
Complexity		0.7555	0.4487
Card 1	0.4240	0.1798	
Card 2	0.5485	0.3008	
Card 3BM	0.5404	0.2920	
Card 4	0.5167	0.2670	
Card 7GF	0.5229	0.2734	
Card 6BM	0.5824	0.3392	
Card 8BM	0.5537	0.3066	
Card 14	0.3665	0.1343	

Continued next page.

Table 11, continued.

Construct and Indicators	Standardized Factor Loading	Reliability	Variance Extracted
Card 15	0.4879		0.2381
Affect Tone		0.7024	0.3583
Card 1	0.3975		0.1580
Card 2	0.4739		0.2246
Card 3BM	0.2503		0.0627
Card 4	0.3032		0.0919
Card 7GF	0.5965		0.3558
Card 6BM	0.5211		0.2715
Card 8BM	0.5127		0.2629
Card 13MF	0.6379		0.4069
Card 14	0.3792		0.1438
Investment		0.7336	0.4055
Card 1	0.5936		0.3523
Card 2	0.3105		0.0964
Card 3BM	0.4722		0.2230
Card 4	0.5182		0.2685
Card 7GF	0.5168		0.2670
Card 6BM	0.5357		0.2870
Card 8BM	0.4045		0.1636
Card 13MF	0.5972		0.3567
Card 14	0.3780		0.1429
Causality		0.7938	0.5463
Card 1	0.3030		0.0918
Card 2	0.4843		0.2345
Card 3BM	0.3656		0.1337
Card 4	0.6541		0.4279
Card 7GF	0.4913		0.2414
Card 6BM	0.7735		0.5984
Card 8BM	0.5399		0.2915
Card 13MF	0.5140		0.2642
Card 14	0.4148		0.1721
Card 15	0.6794		0.4616
Mother's Dysfunction		0.8320	0.7037
Depression	0.7087		0.5023
Other Psychiatic	0.4689		0.2198
Suicidality	0.8565		0.7335
Aggression	0.5167		0.2670
Medical Problems	0.7381		0.5447

Continued next page.

Table 11, continued.

Construct and Indicators	Standardized Factor Loading	Reliability	Variance Extracted
Extent of Harm	0.7068	0.4996	
Father's Dysfunction		0.8461	0.7205
Depression	0.8224	0.6763	
Other Psychiatric	0.7314	0.5350	
Suicidality	0.5909	0.3492	
Aggression	0.6098	0.3719	
Medical Problems	0.4923	0.2423	
Other Problems	0.4988	0.2488	
Extent of Harm	0.8498	0.7221	
Emotional Abuse		0.9446	0.9353
Frequency	0.9819	0.9642	
Duration	0.8977	0.8059	
Extent of Harm	0.8856	0.7843	
Physical Abuse		0.9567	0.9509
Frequency	0.9551	0.9122	
Duration	0.9161	0.8392	
Extent of Harm	0.9442	0.8915	
Sexual Abuse		0.9822	0.9810
Frequency	0.9331	0.8706	
Duration	0.9902	0.9805	
Extent of Harm	0.9645	0.9302	
Extent Coercion	0.9727	0.9462	
Inconsistency		0.8421	0.7801
Living Situations	0.8378	0.7019	
Parents Separated	0.9636	0.9285	
Trauma of Divorce	0.8088	0.6542	
Father Important	0.3232	0.1045	

The Structural Model

The structural portion of the model describes the directional paths between latent constructs. The structural model for the study is presented in Figure 1. All possible paths between early experience constructs and object relations constructs were estimated. Similarly, all possible paths between object relations constructs and the

Depression, Aggression, and Suicide Attempt constructs were estimated. It was anticipated that some paths would be non-significant. In fact, one goal of the study was to discern the presence or absence, as well as the relative strength, of these relationships. In addition, the error or disturbance terms for the object relations constructs were allowed to covary with each other to allow for common error variance among these constructs, including method variance.

Model Identification. With complex models such as the one analyzed here which includes correlated error terms, it is important to establish that the model is identified. A model is identified if there exists an algebraic solution for each of the parameters to be estimated. If identification of both the measurement and structural portions of the model can be established, then the model as a whole is identified (Bollen, 1989). The identification of the measurement model was established according to the FC1 Rule (Davis, 1993), an identification rule for CFA models with a factor complexity of one. To establish identification of the measurement model using this rule, the error term for the single indicator of the Suicide Ideation construct was constrained to zero. With "block recursive" (Bollen, 1989; Fox, 1984) structural models, such as the one considered here, it is sufficient to establish the identification of each block separately. The early experience and object relations constructs, with their correlated error terms, form one block that is identified according to Bollen's (1989) Null B Rule. The block comprised of the four depression, aggression, and suicide constructs is recursive, and therefore identified by Bollen's (1989) Recursive Rule. Thus, the identification of the entire model was established.

Psychometric Properties of the Structural Model. Table 10 contains the fit indices for the structural model. The non-significant model chi-square and high incremental fit indices indicate that the model fits the data. An additional important test of the fit of the structural model is a chi-square difference test that compares the fit of the structural model to the fit of the measurement model (Hatcher, 1994). If this test is non-significant, then the structural model successfully accounts for the observed covariances among the latent constructs, providing evidence for the nomological validity of the model (Anderson & Gerbing, 1988). The test is performed by subtracting the structural model chi-square from the measurement model chi-square. The resulting chi-square is 2620.26 - 2573.93 = 46.33, and the degrees of freedom are 2516 - 2485 = 31. The chi-square difference test is non-significant, providing further support for the structural model.

Table 12 contains the unstandardized and standardized path coefficients for the structural model, as well as the multiple correlations for each endogenous (dependent) construct. Multiple correlations, estimates of the percent of variance accounted for by each latent construct, ranged from .09 for Suicide Attempts to .56 for Suicidal Ideation. As anticipated, not all directional paths between constructs were significant. Unanticipated, however, was the mixed pattern of positive and negative paths observed in the model; all paths were expected to be negative, with the exception of the three paths leading directly to the suicidal ideation construct.Table 13 contains the covariances among the disturbance terms for the object relations constructs. Table 14

presents the covariances among the exogenous early experience constructs, which were allowed to covary in the model.

Table 12. Path Coefficients and Multiple Correlations for the Structural Model

	Unstd. Coeff.	Std. Error	Std. Coeff.	Multiple Correlation
Suicidal Ideation				.5611
Suicide Attempts	0.0207***	.0057	0.2859	
Depression	0.0192***	.0024	0.7281	
Aggression	-0.0038	.0028	-0.1166	
Suicide Attempts				.0857
Complexity	-0.2080	.5584	-0.0530	
Affect Tone	0.4293	.5148	0.1241	
Investment	-0.4640	.8931	-0.1134	
Causality	1.0292*	.5253	0.3705	
Depression				.4748
Complexity	8.0126***	2.0050	0.7431	
Affect Tone	-6.9868***	2.0011	-0.7357	
Investment	8.5210**	3.2111	0.7588	
Causality	-5.8068**	1.8552	-0.7617	
Aggression				.3742
Complexity	5.4321***	1.6306	0.6265	
Affect Tone	-4.9532**	1.6297	-0.6486	
Investment	7.5485**	2.7343	0.8360	
Causality	-6.2356***	1.5993	-1.0173	
Complexity				.1605
M's Dysfunction	-0.0074	.0716	-0.0135	
F's Dysfunction	0.0405	.0483	0.0959	
Physical Abuse	-0.0864***	.0256	-0.3919	
Emotional Abuse	0.0148	.0167	0.1053	
Sexual Abuse	-0.0050	.0589	-0.0084	
Inconsistency	0.0035	.0490	0.0066	
Affect Tone				.2254
M's Dysfunction	-0.0984	.0854	-0.1577	
F's Dysfunction	0.0674	.0567	0.1407	
Physical Abuse	0.0380	.0279	0.1519	
Emotional Abuse	0.0642**	.0208	0.4026	
Sexual Abuse	0.1065	.0707	0.1554	
Inconsistency	0.0301	.0567	0.0508	

Continued next page.

Table 12, continued

	Unstd. Coeff.	Std. Error	Std. Coeff.	Multiple Correlation
Investment				.1160
M's Dysfunction	-0.0374	.0706	-0.0709	
F's Dysfunction	0.0518	.0470	0.1277	
Physical Abuse	-0.0272	.0229	-0.1287	
Emotional Abuse	0.0434*	.0172	0.3214	
Sexual Abuse	0.0061	.0573	0.0105	
Inconsistency	0.0133	.0470	0.0266	
Causality				.1216
M's Dysfunction	-0.0880	.0973	-0.1132	
F's Dysfunction	0.0371	.0651	0.0621	
Physical Abuse	-0.0764**	.0316	-0.2449	
Emotional Abuse	0.0325	.0229	0.1635	
Sexual Abuse	0.2292**	.0827	0.2685	
Inconsistency	-0.0266	.0654	-0.0360	

*$p < .05$, **$p < .01$, ***$p < .001$.

Table 13. Covariances and Correlations among Object Relations Disturbance Terms

	Covariance	Correlation
Complexity		
Affect Tone	0.0644**	0.3744
Investment	0.0826***	0.5319
Causality	0.1654***	0.7247
Affect Tone		
Investment	0.1083**	0.6389
Causality	0.0503	0.2021
Investment		
Causality	0.1676***	0.7471

**$p < .01$, ***$p < .001$.

Table 14. Covariances and Correlations among Early Experience Constructs

	Covariance	Correlation
Mother's Dysfunction		
Father's Dysfunction	0.3173**	0.3917
Physical Abuse	0.2648	0.1707
Emotional Abuse	0.9741**	0.4005
Sexual Abuse	0.0580	0.1024
Inconsistency	0.0967	0.1477
Father's Dysfunction		
Physical Abuse	0.1536	0.0761
Emotional Abuse	0.4130	0.1304
Sexual Abuse	0.0206	0.0279
Inconsistency	0.0231	0.0271
Physical Abuse		
Emotional Abuse	0.8796	0.1450
Sexual Abuse	0.3373*	0.2389
Inconsistency	-0.0416	-0.0255
Emotional Abuse		
Sexual Abuse	0.0617	0.0279
Inconsistency	0.1134	0.0443
Sexual Abuse		
Inconsistency	-0.0337	-0.0566

*$p < .05$, **$p < .01$, ***$p < .001$.

Figure 2 depicts the final results of the structural equation modeling. Because violation of the multi-normality assumption results in underestimation of the significance of path coefficients, all paths with standardized path coefficients greater than .10 are shown.

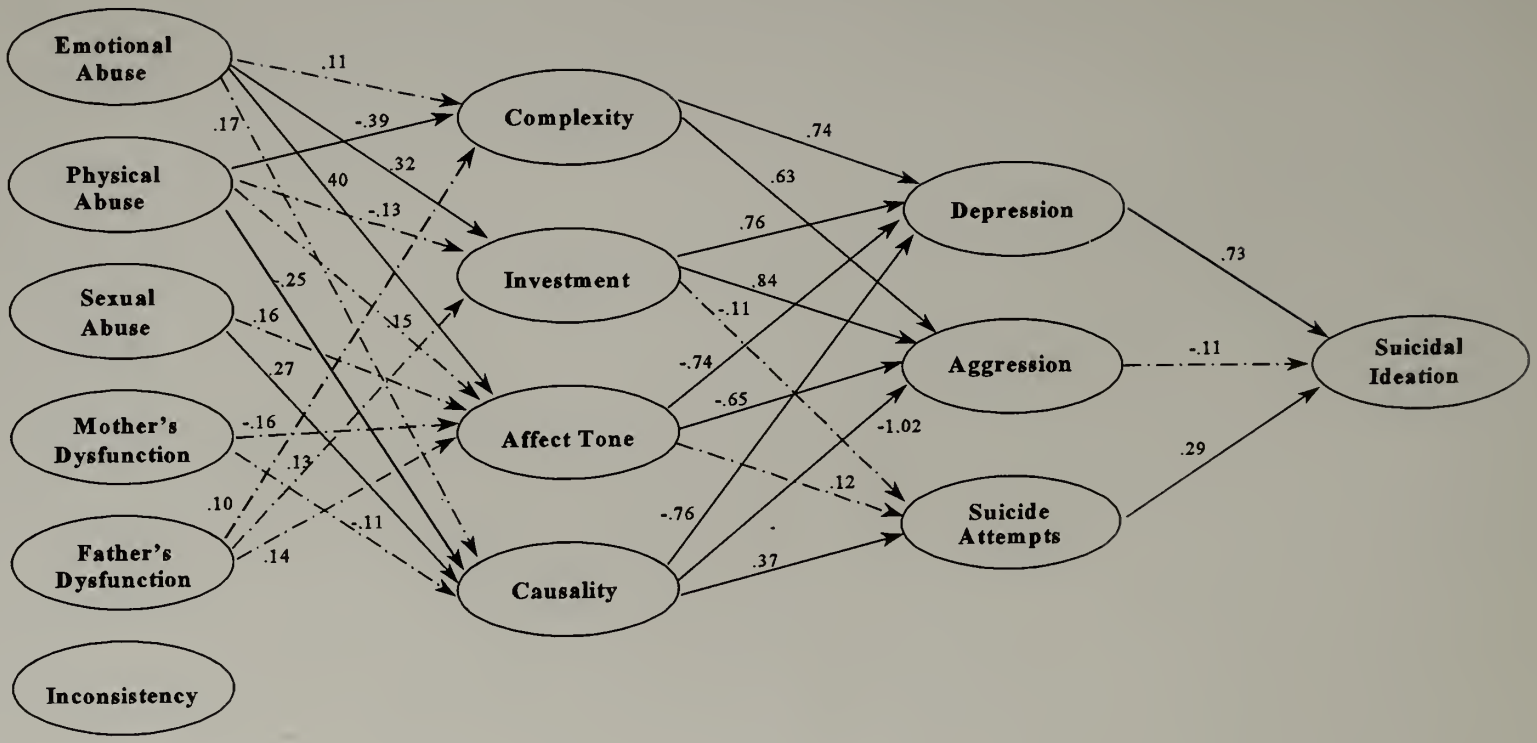

Figure 2. Results of the Structural Equation Modeling.
Standardized path coefficients are shown. Solid lines indicate statistically significant paths, with $p < .05$. Broken lines indicate non-significant paths with standardized coefficients greater than .10.

CHAPTER 4

DISCUSSION

Before embarking on an extensive discussion of the results of the structural equation modeling, a clarification about causality is in order. The theoretical model advanced here is a causal one, and structural equation modeling is a technique that asks causal questions of correlational data. The technique allows complex theoretical models to be developed and verified statistically; however, definitive validation of any causal model must eventually come from longitudinal or experimental research. With this caveat in mind, the results of this study are discussed using the causal language of structural equation modeling.

The overarching goal of this study was to elucidate the mediating role of object relations with respect to potentially pathogenic experiences in early life and the development of suicidal ideation in young adulthood. The structural equation modeling substantiated the importance of object relations in the development of suicidal ideation, and explicated the internal object world that was the foundation for the emergence of depression, aggression, and suicidal ideation in these college students.

Paths to Object Relations

Several potentially pathogenic childhood experiences significantly impacted the development of object relations in the subjects, although not all relationships between childhood experiences and object relations were in the predicted direction. It was anticipated that deleterious early experiences of greater frequency, duration, and

magnitude would lead to less mature or healthy object relations; however, this prediction was not uniformly supported in the structural model.

Effects of Abuse in Childhood

Childhood emotional, physical, and sexual abuse exerted significant effects on characteristics of object relations. As anticipated, different types of abuse wielded differential effects.

Physical abuse inhibited the development of two facets of object relations, complexity of representations of people and understanding of social causality. Thus, subjects who reported physical abuse by a parent during childhood demonstrated a diminished capacity to view people as having enduring, multi-dimensional characteristics, clearly differentiated perspectives, and logical, psychologically-minded motives for their actions, thoughts, and feelings. Physical abuse did not eventuate either in more malevolent expectancies of people or attenuated emotional investment in relationships.

The following is a TAT story that demonstrates this pattern of object relations. The story was written by a 21 year old man who reported occasional physical abuse by both parents between the ages of 8 and 18 that he experienced as mild and minimally harmful. This subject wrote the following story in response to a picture of a farm scene, in which a man works in the field, a young woman holding books stands in the foreground, and an older woman looks on (Card 2):

> This is a picture of a man farming the land, with his back to us. A woman is standing proudly and is pregnant while a school girl who is holding her books seems to be a bit perturbed. The farmer is probably

> trying to get his horse to work harder. The pregnant woman is probably thinking about her child. The school girl seems to be daydreaming about nothing, but probably school boys. I really can't see an outcome. The guy farms the land, the woman has the child, and the school girl gets smart.

Subjects who were physically abused in childhood tended to consider personality and motivation in rather simplistic terms, as tantamount to overt behavior. Striking in this example are the subject's reluctance to hypothesize about either the characters' inner states or the outcome of the story; the bland affect and absence of relatedness between characters are also notable. When one has been the target of overtly harmful actions perpetrated by a parent, behavior may become the most salient dimension on which to evaluate others. Although few researchers have examined the link between object relations and childhood abuse, Stovall and Craig's (1990) study of object relations in physically and sexually abused latency age girls corroborates these results. Thus, parental violence toward a child may thwart development of an appreciation for the importance of complex internal processes in personality and motivation by rivetting the child's attention on manifest action.

Experiences of emotional abuse in childhood exerted unexpected effects. Contrary to prediction, emotional abuse engendered greater emotional investment in relationships and a tendency to view others as more benevolent and nurturing; emotional abuse did not significantly affect the complexity of representations or understanding of social causality. For example, a 20 year old man who reported experiencing occasional, mild emotional abuse by both parents since age 10, wrote the

following story in response to a picture in which a woman and a girl with a doll are sitting together on a couch (Card 7GF):

> Mother explains to her 10 year old daughter how difficult babies are to handle. The daughter clings to her doll and insists she wants the real thing. Mom has become frazzled. How to make her daughter see that human life is not a toy eluded her. Mom began to explain about the birds and the bees, the "miracle of life." How hard labor had been. Yet, it had all been worth it. The mother explains to her daughter with affection, "It is the most wonderful gift you could ever receive." The 10 year old is confused. Babies are so adorable. How could they be work?

As this story illustrates, emotionally abused subjects tended to portray relationships characterized by both positive and negative affect tone, with relatively less negative valence than subjects who were not emotionally abused. Also evident here, as in the stories of emotionally abused subjects more generally, is a conventional level of investment in people and moral standards, with relationships understood to involve compassion and reciprocity.

The apparent positive effect of emotional abuse on affect tone and emotional investment in relationships clearly warrants further consideration. One hypothesis with respect to emotional investment in relationships arises from the likelihood that emotional abuse disrupts the attachment bond between child and parent and thereby undermines the child's self-esteem and self-confidence (Cummings & Cicchetti, 1990). A sense of personal failure and pervasive self-doubt may foster greater reliance on others. It is possible, then, that the greater emotional investment in relationships manifested by emotionally abused subjects arose from feelings of personal inadequacy

and consequent fear of autonomy, rather than because these subjects desired relationships that involve healthy mutuality.

Another explanation for this counter-intuitive result is that the positive relationships are an artifact of gender differences in object relations. Although a similar proportion of men and women reported childhood emotional abuse, women reported more frequent and harmful experiences. In addition, women's mean scores exceeded men's on each of the object relations scales. Thus, the positive relationships between emotional abuse and object relations may simply reflect a tendency for women to report more serious experiences of emotional abuse than men, and for women, including those who have been emotionally abused, to hold a view of relationships as relatively more benevolent and reciprocal.

A potentially more interesting possibility involving gender differences is suggested by the finding that women with a history of suicide attempts describe relationships with their parents as conflicted and enmeshed, while men who have attempted suicide perceive their parents as passive and uninvolved (Lewinsohn, Rohde, & Seeley, 1993; Meneese, Yutrzenka, & Vitale, 1992). Perhaps the nature of parental relationships captured by the emotional abuse construct is more characteristic of distressed women than men, and this accounts for the apparent positive effect of emotional abuse on affect tone and investment in relationships.

The positive relationship between sexual abuse and understanding of social causality was also clearly unanticipated. Contrary to prediction, childhood sexual abuse experiences in this sample precipitated an enhanced appreciation for the role of

thoughts and feelings in mediating one's behavior. In response to the same picture of a mother and daughter, for example, a 22 year old woman who reported traumatic sexual abuse experiences between the ages of 10 and 11, which included being forced to watch her older nephew fondle his sister, wrote this story:

> Sarah has decided to tell her mother that her Uncle Tom has been touching her in strange places. She feels awkward and ashamed but realizes that someone must know. She explains to her mother that it was not her fault because she tried to stay away but her uncle kept popping up for a surprise visit. Her mother listens apathetically but does not know what to say. Her mother feels so much guilt and sadness because it had been going on for several months. Sarah finishes her story and her mother cries, hugs Sarah, and assures her that it will never happen again.

This story demonstrates a relatively sophisticated understanding of causality in the social realm, where internal states, not just overt actions, are causal, leading to other internal states as well as manifest behaviors; interestingly, the affect tone of this story is not overtly malevolent, but is a mixture of positive and negative feelings. The object relations of sexually abused subjects were not markedly impaired, contrary to prediction.

This result is in direct contradiction to a large theoretical and empirical literature linking sexual abuse and borderline personality disorder (Herman, Perry, & van der Kolk 1989; Shearer, Peters, Quaytman, & Ogden, 1990; Stone, 1990; Westen, Ludolph, Misle, Ruffins, & Block, 1990; Westen, Ludolph, Block et al., 1990; Zanarini, Gunderson, Marino, Schwartz, & Frankenberg, 1989). From a psychoanalytic perspective, the hallmark of borderline personality disorder is an internal object world characterized by malevolent affect tone, a need-gratifying

orientation to relationships, and idiosyncratic or inaccurate understanding of others' actions (Bowlby, 1973; Kernberg, 1975; Westen, 1990b). In particular, borderline patients with a history of childhood sexual abuse evidence internal object representations characterized by extreme malevolence (Nigg, Silk, Westen, Lohr, Gold, Goodrich, & Ogata, 1991; Westen, Ludolph, Block et al., 1990). Some theorists (e.g., Kernberg, 1975) posit that intense rage, engendered by chronic and severe maltreatment by parents, distorts one's ability to attribute accurately others' motivations and intentions; consequently, malevolent affect tone may preclude accurate understanding of personality and motivation.

It was anticipated that similar effects would be revealed in this college student sample, that sexual abuse would lead to impairment in object relations, and particularly the affect tone of relationships. Alternatively, it may be that the relationship between severity of childhood sexual abuse and impairment in object relations is not linear. In this sample, sexual abuse was, on average, a post-oedipal experience that began around age 8 and occurred less than once a month for a duration of just more than two years; almost half of the reported abuse was extra-familial. Most subjects declined to provide details about the abuse, so its intrusiveness could not be assessed. Nevertheless, the reported experiences were disparate. One woman described frequent, highly intrusive and traumatic sexual abuse perpetrated by several male relatives, including her father, that began when she was two years of age; another subject reported infrequent sexual activities with an older sister which he described as sexual play rather than abuse. Moreover, approximately one third of child abuse victims appear to suffer no ill

consequences from their experiences (Finklehor, 1990). Without minimizing their deleterious effects, it seems clear that the abuse reported by these subjects, while potentially problematic if not clearly traumatic, pales in comparison to the chronicity and severity of sexual abuse reported by sexually abused borderline patients.

Consequently, one explanation for the positive effect of sexual abuse on understanding of social causality in the structural model is that relatively mild sexual abuse experiences, such as those reported by this sample, force one to adopt a more sophisticated notion of interpersonal motives in order to understand these untoward experiences. Sexual abuse often involves a complex emotional relationship between child and perpetrator marked by secrecy, ambivalence, affective arousal, and role reversal (Alexander, 1992). It would not be surprising to learn that involvement in such a relationship forces one to eschew facile understandings of the social world, if only to explain one's own behavior. That sexual abuse in this study did not lead to grossly malevolent affect tone of relationships, which may fuel idiosyncratic or inaccurate perceptions of social causality, is notable; perhaps in the absence of overwhelmingly malevolent affect tone, the causal attributions of sexually abused individuals do not become illogical or idiosyncratic.

The possibility that gender differences account for this unexpected positive relationship is also important to consider. The preponderance of subjects who reported sexual abuse experiences were women, and women obtained higher scores on the social causality scale than men. Consequently, this effect could be explained by the confounding effect of gender. This is not necessarily substantively uninteresting,

however. Girls are more often subjected to the most traumatic sexual abuse experiences, such as habitual abuse by a trusted father figure that begins in early life and continues for many years (Beitchman, Zucker, Hood, DaCosta, & Akman, 1991; Finkelhor, 1990), and it is this type of sexual abuse that is associated with impaired object relations, as well as with serious difficulties in later life.

Finally, a methodological explanation may be advanced to explain this unexpected result. The sexual abuse literature is replete with warnings about the difficulty of accurately detecting both true positive (Lanktree, Briere, & Zaidi, 1991) and true negative (Dempster & Roberts, 1991) cases of childhood sexual abuse. Despite the relative anonymity afforded subjects in this study, the plethora of unanswered questions related to subjects' abuse experiences intimates that some who had experienced sexual abuse were unwilling to acknowledge it, either in full or in part.

Effects of Parental Dysfunction

It was anticipated that parental dysfunction, such as depression, suicidality, aggression, and substance abuse, would result in impaired object relations. In one of the SCORS validation studies, for example, parental psychiatric illness, maternal alcohol abuse, and paternal criminality were associated with lower scores on the affect tone, emotional investment, and understanding of social causality dimensions of the SCORS (Westen, Ludolph, Block et al., 1990). Similarly, parental alcoholism is thought to hinder the development of healthy attachment and object relations (Meyer & Phillips, 1990), and parental depression and suicidality are linked with the emergence

of similar difficulties in one's offspring (Hutchinson & Draguns, 1987; Pfeffer, 1986; Stone, 1992).

Contrary to prediction, parental dysfunction did not hinder the development of healthy object relations, according to the structural model. The positive correlation between maternal dysfunction and emotional abuse was significant, however, and suggests that a mother's problems may have exerted an indirect effect on object relations; that is, maternal dysfunction may have affected object relations when it eventuated in interactions of sufficient severity to be considered abusive. The maternal and paternal dysfunction constructs were also correlated; subjects perceived mother and father figures to manifest similar levels of problematic behavior. On the other hand, this correlation may reflect common method variance, in particular variance reflecting the willingness to enumerate a parent's difficulties.

A crucial consideration here is a methodological one. The parents about whom the dysfunction information was obtained were subjects' "most important" male and female parental figures, not necessarily their biological or custodial parents. While most subjects (94%) provided information about their biological mothers, and dysfunction ratings for biological mothers and other mother figures were similar, fewer of the identified father figures were biological fathers (84%), and biological fathers were rated as significantly more depressed and aggressive than other father figures. Some subjects declined to identify as "most important" biological fathers with whom they had lived their entire lives. While the level of dysfunction of these fathers is

unfortunately unknown, the apparent absence of attachment to a subset of biological fathers is striking.

Perhaps fathers whose behavior or characteristics were burdensome or harmful to subjects were less likely to be identified as important; for instance, one subject commented that her "real father was not a good father," and identified a father substitute as having a more positive impact on her life. Additionally, paternal dysfunction may lead to marital separation or divorce, precipitating limited or sporadic contact with children. Subjects who had occasional contact with their fathers due to parental divorce were also likely to indicate that father substitutes played a more significant role in their lives.

If these suppositions are valid, then dysfunction information for the most disturbed biological or custodial fathers was missing from the model and replaced with information about father substitutes, such as older brothers, uncles, and friends, who were valued presumably because they manifested fewer problems. In that case, the absence of significant effects on object relations would in fact be expected. Individuals who had limited intimate contact with subjects during childhood would not have significantly impacted the development of their object relations. Nevertheless, this methodological anomaly does not completely explain the observed results; the absence of significant effects for the dysfunction of biological mothers is still a surprising finding that warrants further investigation. Clearly, these results would be simpler to interpret without this unknown and irreconcilable confound.

An alternative hypothesis for the failure to detect the effects of parental dysfunction on object relations is that the types of dysfunction assessed here were insufficiently moderate for use in a study of normal subjects with presumably normal parents. That the majority of parents were perceived by subjects as manifesting none of the problem areas assessed in the model supports this possibility. Thus, while many parents of suicidal psychiatric patients have been shown to have serious psychiatric difficulties of their own, more subtle forms of parental dysfunction may need to be included in a study of object relations and suicidal ideation in college students.

Effects of Inconsistency

Inconsistency of contact with parents exerted no detectable effect on any dimension of object relations. This is surprising in light of the cogent theoretical and empirical literature reviewed above that attests to the destructive consequences of unpredictable or erratic contact with parental figures.

A strong possibility for the lack of significant relationships is that the indicators were poor measures of the important underlying theoretical construct. Assessment of the measurement model using CFA resulted in the omission of two of the construct's six original indicators, and a third indicator (Importance of Father) demonstrated very low reliability. In the structural model, the inconsistency construct was not significantly correlated with any other early experience construct. Nevertheless, the construct yielded good overall reliability and extracted a significant portion of the variance associated with its remaining indicators.

A closer look at the indicator variables is in order. The Inconsistency construct was designed to capture a range of potentially harmful experiences, including parental death, parental separation and divorce, shifting primary caretakers, and distant relationships with parents. Parental death was a rare occurrence in this sample, reported by only twelve subjects, and so its deleterious effects on object relations may have gone undetected. Parental separation and divorce were relatively common experiences that were associated with suicidal ideation in another study involving college students (Rudd, 1989). Nevertheless, some studies with more disturbed populations have failed to find a specific link between suicidality and loss of contact with parents (e.g., Khan, 1987; Spirito et al., 1989). The number of living situations subjects experienced was a significant predictor of self-injury in a study of young psychiatric inpatients (Vivona et al., 1995), but was perhaps less meaningful in this older, non-clinical sample. Finally, the importance of the identified male and female parental figures was included as a subjective measure of attachment to the parent. The unknown effects of the confound discussed above may have contaminated these results, however.

Perhaps more subtle measures of the quality of contact with parents are needed in this non-clinical population. Studies of normal adolescents have found that suicidal ideation is associated with a family environment characterized by disorganization, aggression, conflict, and prohibition of autonomy (Friedrich, Reams, & Jacobs, 1982; Meneese & Yutrzenka, 1990). The inconsistency construct would no doubt be improved by inclusion of indicators that capture specific potentially harmful qualities of relationships with parents.

Summary of Effects of Early Experiences on Object Relations

The results of the structural equation modeling revealed that the most destructive early experiences, childhood physical, sexual, and emotional abuse, induced specific and detectable effects in the internal object world, some anticipated and some intriguing. Each type of abuse engendered a distinct pattern of object relations; each dimension of object relations was impacted by at least one type of childhood abuse. That parental dysfunction and inconsistency of contact with parents did not hinder the development of healthy object relations is striking, and perhaps related more to methodological than substantive issues; assessment of subtle qualities of parental characteristics and relationships may have yielded significant results.

Clearly, the early experiences examined here are interrelated. Parents who are physically, emotionally, or sexually abusive are likely to be perceived by their children as having significant difficulties; dysfunctional parents may initiate detrimental and even abusive interactions with their children. Moreover, parental difficulties may precipitate or succeed marital instability, and may result in a child having inconsistent or unpredictable contact with one or both parents. It appears that in this normal sample, it was only when these interrelated potentially pathogenic early experiences eventuated in identifiable abuse that their deleterious effects on object relations were detected.

Paths to Depression and Aggression

It was anticipated that dimensions of object relations would exert uniformly negative effects on depression and aggression, that more immature or impaired object relations would lead to higher levels of depression and aggression. This was not

consistently true in the structural model, however; in fact, the pathogenic pattern of object relations revealed in the model is perhaps more compelling than the general impairment in object relations that was predicted.

Before these results are considered in depth, the veracity of subjects' responses to the self-report inventories may be questioned. Perhaps after completing an extensive questionnaire about painful childhood experiences, subjects consciously or unconsciously understated their levels of depression and aggression on the self-report inventories, resulting in the mixed pattern of results. This possibility seems unlikely, however, because two of the four object relations dimensions demonstrated the expected negative relationships with depression and aggression. Furthermore, in a large study of childhood sexual experiences in a college sample, investigators found that the order of administration of a sexual abuse questionnaire and several self-report inventories such as those used here was unrelated to the degree of distress subjects revealed on the inventories (Haugaard & Emery, 1989). In addition, self-report measures are considered a valid and effective means for measuring subjective experiences, including depression (Kazdin, 1990).

The observed pattern of object relations elucidated in the model necessitates further consideration. Therefore, the unexpected positive effects on depression and aggression of two dimensions of object relations, complexity of representations and emotional investment in relationships, are discussed first, followed by consideration of the overall pattern of object relations manifested by subjects who reported elevated levels of depression and aggression.

Effects of Complexity of Representations

Contrary to prediction, subjects who demonstrated greater psychological sophistication in their understanding of personality manifested higher levels of depression and aggression. While the complexity of representations is, according to psychoanalytic theory, expected to increase with maturity and psychological health (Westen, 1990a), this assumption has not been uniformly supported by the SCORS validation studies. For example, adolescent girls with borderline personality disorder did not manifest simplified or undifferentiated representations of people (Westen, Ludolph, Lerner, Ruffins, & Wiss, 1990), and more complex representations were associated with maternal physical abuse and grossly inappropriate parenting in another sample of psychiatrically disturbed adolescent girls (Westen, Ludolph, Block, Wixom, & Wiss, 1990). Westen and his colleagues suggest that object relations associated with psychopathology, including borderline personality disorder, may be complex and yet reflect idiosyncratic attributions, a need-gratifying orientation to relationships, and malevolent expectations of others. Moreover, these authors (Westen, Huebner, Lifton, Silverman, Boekamp, 1991) have suggested that in normal subjects, the understanding of social causality dimension is more closely related to psychopathology than is the complexity dimension. This hypothesis is consonant with the results of the structural model considered here.

Alternatively, perhaps subjects who viewed people as having complex, multi-dimensional, and enduring characteristics were more willing or better able to acknowledge their own difficulties on the self-report inventories. The ability to

conceptualize personality as comprising various potentially conflicting qualities and feelings would enable one to acknowledge difficulties while remaining cognizant of one's strengths and therefore without experiencing shame that might inhibit candid responding. This possibility is suggested by the suggestion that the complexity scale reflects psychological-mindedness in non-clinical samples (Westen, Huebner, Lifton, Silverman, Boekamp, 1991).

Also relevant here is the interesting concept of self-continuity posited by Ball and Chandler (1989). Self-continuity, an aspect of identity, pertains to an understanding of the contiguous nature of the self across time despite manifest changes; advances in self-continuity are predicated, as least in part, upon the development of an increasingly complex understanding of personality. Ball and Chandler (1989) found, contrary to their prediction, that a small subset of seriously suicidal adolescents manifested mature levels of self-continuity; they hypothesized that the relationship between self-continuity and suicidal behavior is complex, and that self-continuity is not impaired in all suicidal young people. Complexity of representations, then, a subset of the concept of self-continuity, may have a similarly complex relationship to depression and suicidal ideation, as is reflected in the model.

Effects of Emotional Investment in Relationships

Another surprising result involved the effect of emotional investment in interpersonal relationships on aggression and depression; subjects who held a relatively conventional view of relationships as reciprocal rather than need-gratifying reported higher levels of depressive symptoms and aggressive thoughts, feelings, and behaviors.

It is possible that this unanticipated positive relationship is attributable to a confound involving the importance of the interpersonal realm. Aggression is an interpersonal phenomenon, and, not surprisingly, the Aggression Questionnaire assesses one's behavior in the interpersonal world. Perhaps one who has minimal emotional investment in relationships would obtain a low score on a measure of an interpersonal phenomenon because he or she does not attend to, experience, or become concerned about events in the interpersonal realm. More generally, individuals who dismiss the personal relevance or bearing of relationships are unlikely to avow internal distress (Kobak & Sceery, 1988).

Two additional hypotheses can be advanced. First, an individual who values relationships and views them as mutual and reciprocal may construe participation in research as an interpersonal situation that confers a responsibility to participate fully, thus encouraging self-disclosure. Second, the emotional investment dimension of the SCORS also assesses investment in moral standards; the scale incorporates an integration of theories of moral development advanced by Kohlberg (1981) and Gilligan (1982). It would not be surprising to find that individuals with higher levels of moral development responded more honestly to the self-report inventories, and therefore revealed greater depression and aggressive tendencies.

Pattern of Object Relations Related to Depression and Aggression

Two dimensions of object relations, affect tone of relationships and understanding of causality, exerted strong negative effects on depression and aggression, as predicted; malevolent affect tone and the tendency to misattribute others'

motives caused subjects to become depressed and to think, feel, or behave more aggressively. Conversely, as considered above, sophisticated understanding of personality and greater emotional investment in relationships led to higher levels of depression and aggression. Thus, the structural model revealed that depression and aggression arose most often in young adults who manifested an object world characterized by a psychologically sophisticated view of self and others as separate and multi-dimensional, an understanding of relationships as reciprocal and important, an expectation that relationships will eventuate in malevolence or abandonment, and a tendency to view others' behavior as arbitrary, idiosyncratic, or inexplicable.

This pattern of object relations and its relation to the development of suicidal ideation is illustrated poignantly by a story written in response to a picture of a person slumped on the floor against a couch (Card 3BM). Its author, a 21 year old woman, scored in the "severe" range on the Beck Depression Inventory and Hopelessness Scale and above the mean on each Aggression Questionnaire scale; on the ASIQ, she scored above the 99th percentile for college students.

> This girl has had a long, stressful day. It was similar to other days, but much worse. Everything in her life seems to be going wrong. She can't find any solutions and feels as though there is no one she can turn to. Her family was always distant and her friends act as if she no longer exists. The more she thinks about how her life is going, the more her head seems to hurt. She often cries, as she is doing now with her head on the pillow. Before when things were going wrong she would talk to the one special person in her life who left her recently. She continues to cry and finally confronts herself with the question of whether or not she should continue to live.

Evident here is the expectation that important supportive relationships will be painfully absent at a time of crisis, when caring from family and friends is needed desperately. Without succorance from others and hopeless about her ability to resolve her dilemma alone, the character contemplates escape through suicide.

Object Relations and Depression. First, it is worthwhile to consider the effects of object relations on depression with respect to the tasks of late adolescent and early adult development. While traditional psychoanalytic theorists (e.g., Blos, 1962) considered parental relationships to be repudiated in adolescence and replaced with peer relationships, it is now understood that on-going healthy relationships with parents facilitate the developmental progression from primary reliance on family to greater reliance on peers for emotional sustenance (Bowlby, 1988). The simultaneous experience of autonomy and connection in relationships is vital for successful negotiation of this stage of development; failure to negotiate the adolescent "crisis of intimacy" leads to a deep sense of isolation, from others as well as from oneself (Erikson, 1968).

A young adult who values interpersonal relationships yet views others as unpredictable and potentially harmful may have considerable difficulty forming peer relationships that afford emotional support. Furthermore, if a sense of personal failure and self-doubt intensifies one's need for sustaining relationships, the inability to form satisfying bonds with others would provoke considerable distress. Thus, the pattern of object relations revealed in the model may leave one poorly equipped to negotiate the transition to adulthood, and depression may result.

Rudd (1989) drew a similar conclusion from his study of suicidal ideation in a college student population, in which he found that low social support from family members resulted in more intense suicidal ideation and depression, especially in times of negative stress. Rudd suggested that young people with poor familial relationships are unable to establish peer friendships that are sufficiently supportive in times of stress, leading to greater depression. Indeed, strong social support protects against depression and suicidal ideation in young people (Blumenthal, 1990), while suicidal ideation has been linked to a family environment characterized by anger, conflict, rigidity, and obstruction of autonomy (Meneese & Yutrenka, 1990; Pfeffer, 1986).

Moreover, from the perspective of attachment theory, Cummings and Cicchetti (1990) posited that insecure attachment constitutes a general risk factor for the emergence of depressive symptoms in later life because the object relations of insecurely attached individuals perpetuate negative mood, a sense of personal failure, and self-blame. This assertion is supported by the results of a study of attachment style and depressive symptoms in normal adolescents (Kobak, Sudler, & Gamble, 1991).

Finally, this pattern of object relations is consonant with the hypothesis that chronic separation anxiety is a characteristic of adults who attempt suicide. "Separation anxiety implies a sense of vulnerability, as well as the perception of helplessness in preventing further separation and loss of love" (Hutchinson & Draguns, 1988, p. 295). Vulnerability to loss or harm, expectation of abandonment, and feelings of helplessness in the face of the unpredictable behavior of loved ones may lead to depression and ultimately perhaps to suicidal behavior.

Object Relations and Aggression. Psychoanalytic theorists have written volumes about the role of aggression in important relationships. Freud originally conceptualized aggression as a component of libido (1915/1957), but later considered love and hate as opposing forces (1920/1955). Psychoanalysts continue to consider the interplay between these forces. In "Delinquency as a Sign of Hope," Winnicott (1967/1986) argued lucidly that aggression, directed toward self or others, enables one to ward off despair and sustain hope for restitution of an important relationship. Bowlby (1973) noted that a child's aggressive expressions of anger following separation from an important person strengthen the interpersonal bond by punishing the important other, thus discouraging future separations; he viewed suicide attempts as similarly motivated (Bowlby, 1980). Indeed, the use of aggression, including acts of self-injury, to mobilize the interpersonal realm is well documented (e.g., Chowanec, Josephson, Coleman, & Davis, 1991; Senior, 1988). As Cramerus (1990) has suggested, adolescent anger "often represent[s] an attempt to force a relationship with an object that is seen as detached, unresponsive, or rejecting. The object world, which is seen as mocking and derisive of the adolescent's needs, is to be compelled to respond" (p. 515).

This characterization captures the object relations of the aggressive subjects, who expected others to be rejecting, neglecting, and unpredictable, yet desired their affection. Unlike the hostile and contemptuous adolescent psychiatric inpatients of whom Cramerus spoke, the subjects in this investigation manifested aggression that was, on average, mild and normative; its presence may reflect a tendency to use mild

aggression to influence the interpersonal sphere in order to maintain emotional ties to important others. Perhaps when important figures have responded positively to these adaptive expressions of anger in childhood, such responses remain in one's behavioral repertoire. Conversely, sensitivity to interpersonal situations, as reflected by a higher level of emotional investment in relationships, coupled with expectations of capriciousness and harm from others, may facilitate expression of one's aggressive urges by simultaneously increasing the anticipation of attack and lowering inhibitions that arise from the expectation that there are consequences for one's actions.

The Role of Prior Suicide Attempts

One of the exploratory study questions involved the role of prior suicide attempts, which was not clearly specified in the theoretical model. Of the four dimensions of object relations, only understanding of social causality exerted a significant effect on prior suicide attempts, and this relationship was unexpectedly positive. Importantly, the suicide attempt construct demonstrated a very low multiple correlation ($R^2=.09$), indicating that it did not contribute meaningfully to the explanatory power of the model. This may be due in part to the retrospective nature of the suicide attempt reports, and the unknown but potentially significant effects of events that had occurred since the attempt (Salter & Platt, 1990).

There are conceptual problems with the placement of this construct in the model that may have hindered assessment of its effects. For instance, it is possible that the experience of making a suicide attempt affects subsequent levels of depression, aggression, or suicidal ideation; for instance, a suicide attempt can be cathartic

(Farberow, 1981). Similarly, while object relations are affected most significantly by events that occur in early childhood, post-oedipal events, particularly traumatic experiences such as sexual abuse, can impact object relations (Westen, 1990b); thus, a suicide attempt could render an unseen alteration in one's internal object world. Clearly, these reciprocal relationships were not reflected in the structural model.

Among adolescents and young adults, interpersonal motivations for suicide predominate (Farberow, 1968; Peck, 1987). Consequently, the response of important others to a suicide attempt is crucial. A suicide attempt may motivate important others to become more responsive and supportive, may allow one to initiate a therapeutic relationship, or may confirm patently negative expectations of others when rejection or punishment follow this extreme expression of distress. Sadly, most subjects who reported suicide attempts described the responses of significant others as either disapproving or absent. Typical of these responses were statements such as "No one knew," "No one cared," and "I didn't get any help, I just got punished."

A preliminary post hoc examination of the structural model without the suicide attempt construct resulted in a substantively similar model with minor differences in the magnitude of some path coefficients. Consequently, it appears that this construct did not play a significant role in the model overall. The relationships among early experiences, object relations, prior suicide attempts, and current functioning are likely more complex than depicted in the recursive structural model specified here, and thus removal of this construct from the model appears indicated.

Object relations exerted uniformly strong and strikingly similar effects on both depression and aggression. Indeed, theorists who posit childhood deprivation to be of etiologic importance in the emergence in later life of both aggression and depression (e.g., Bowlby, 1973; Menninger, 1938; Winnicott, 1960/1986) secure corroboration from these results, in which depression and aggression arose from an analogous object world marked by expectations of others as potentially harmful and capricious. Nevertheless, it was depression and not aggression that led to suicidal ideation in the structural model. Taken together, these results lend support for the psychoanalytic postulate that depression results when aggression, induced by childhood deprivations and frustrations, is turned toward the self (e.g., Menninger, 1938).

That aggression did not lead to increased suicidal ideation in the model is interesting in light of previous studies that have found some suicidal adolescents to be aggressive but not depressed (e.g., Apter et al., 1988; Brown et al., 1991). Brown and his colleagues (1991), based on their comparison of adolescents who made impulsive suicide attempts with those who made premeditated attempts, suggested that premeditated attempts, accompanied by more severe depression and hopelessness, have a stronger basis in self-directed anger than do impulsive suicide attempts.

This raises an interesting question about factors that influence whether the vulnerability to distress presented by an impaired object world is manifested primarily as depression and suicidal ideation, or as aggression. Brown and his associates (1991) suggested that the target of one's anger, as opposed to the target of aggressive

behavior, is an important consideration. Gender may be another factor that influences the manner in which internal distress is expressed. For example, depressed young men have been shown to be prone to hostile externalizing behavior, while depressed young women tend to be ruminating and withdrawn (Gjerde & Block, 1988).

This question is addressed by Plutchik and van Praag (1990), who developed a model of suicidal and violent behavior in which a common aggressive drive that underlies both violence and suicidality ensues from the chaotic, disrupted, and abusive early environments with which both violence and suicidal behaviors have been associated in the research literature. Whether this drive, after reaching critical intensity, manifests in aggressive behavior directed toward self or others is influenced by a second set of variables; anxiety and sadness have been associated with suicidality, while resentfulness and anger have been linked to violence (Apter, Plutchik, & van Praag, 1993).

The present investigation contributes to Plutchik and van Praag's model an illumination of the internal object world that fans the flame beneath the aggressive drive; unfortunately, it does not extend our knowledge of the crucial second set of variables. For example, despite significant gender differences in object relations scores, there were no gender differences in suicidal ideation, depression, or aggression, with the exception of one scale of the Aggression Questionnaire, that could help to explicate gender as an important factor in the manifestation of one's distress. With respect to the direction of anger, the SCORS scales, which are an amalgam of self and other representations, do not allow discrimination of self-directed and other-directed anger.

However, a tentative hypothesis is that the Hostility scale of the Aggression Questionnaire, which loaded more strongly on the depression than the aggression construct in the measurement model, taps an internal state that reflects self-directed, as opposed to other-directed, anger, as manifested by statements such as "I am sometimes eaten up with jealousy" and "At times I feel I've gotten a raw deal out of life." Clearly, this hypothesis is highly speculative. Additional research is needed to explicate factors associated with the direction in which distress, invoked by the pattern of object relations revealed by the structural model, is manifested.

Limitations and Directions for Future Research

An obvious limitation of this study, noted above, is that it attempts to address a causal and longitudinal question using a correlational and cross-sectional research design. Structural equation modeling allows explication of causal questions with correlational data, but it cannot supplant longitudinal research, from which definitive answers must come. A related limitation involves the use of a retrospective self-report format to collect information about sensitive personal and familial experiences. In order for this information to be obtained from self-report, subjects must have access to accurate memories of early experiences, conscious recognition of problems in one's parents and oneself, and willingness to acknowledge these problems and experiences honestly and completely. The extent to which reliance on retrospective, non-corroborated information about childhood abuse, for example, has influenced these results is unclear.

The use of the college student sample is both a strength and a limitation of the study. Most studies of the suicide spectrum have been conducted with psychiatric patients in whom rates of suicidal ideation and behavior, severe depression, impaired object relations, and potentially pathogenic early experiences are high and therefore more easily studied. The relative paucity of investigations of these phenomena in non-clinical samples posed a challenge to the specification of the theoretical model. Conversely, because few studies of object relations, and none of object relations and suicidal ideation, have been conducted with non-clinical samples, this investigation extends our knowledge of normal object relations as well as of psychopathological processes and experiences occurring in a non-patient population.

With respect to the techniques of structural equation modeling, this study was an initial attempt to create and assess a complex theoretical model. Not surprisingly, problems were revealed in both the measurement and structural portions of the model. Problems arose in the measurement model, as would be expected, with constructs, most notably some of the early experiences constructs, for which standardized measures were unavailable, necessitating the use of novel indicators. Constructs based upon measures with known psychometric properties, such as the depression and aggression constructs, were associated with a greater number of significant structural parameters. Several potential improvements to the measurement model have already been proposed. For example, obtaining information about relationships with parental figures who were prominent during subjects' developmental years is critical. Also clearly indicated is the use of measures of parental dysfunction and familial relationships that are sufficiently

sensitive to capture the difficulties that are typically encountered in a non-clinical population.

Similarly, the structural model suffered from an important conceptual difficulty with respect to the prior suicide attempts construct; removal of this construct would no doubt improve the theoretical, if not also the statistical, validity of the model. Furthermore, it would have been interesting to compare the theoretical model analyzed here to a similar model without the mediating object relations constructs to assure that the greater complexity introduced by the object relations constructs is justified by the explanatory power they contribute to the model.

The moderate sample size precluded an exploration of gender differences that may have clarified some of the unexpected relationships revealed in the structural model. Two important questions are whether gender differences exist in the relationship between early experiences and object relations, and to what extent manifestation of distress as aggression or as depression and suicidal ideation falls along gender lines. With a larger sample, separate gender analyses would have illuminated these questions. Another important direction for future research is determination of the degree to which the model generalizes to clinical and other non-clinical populations; it would be illustrative to assess whether the structural model is tenable with psychiatric patients of various ages, as well as with non-patient children and younger adolescents, for whom potentially pathogenic early experiences are more proximate. Clearly, future investigations are needed to replicate the results of this exploratory study, as well as to clarify or amend some of its unanticipated findings.

Conclusions

Object relations play a crucial role in mediating between deleterious experiences in childhood and depression, aggression, and suicidal ideation in young adulthood. Traumatic early experiences, particularly physical, sexual, and emotional abuse perpetrated by trusted adults, leave an indelible mark on four distinct dimensions of object relations, that is complexity of representations of people, affect tone of relationships, emotional investment in relationships, and understanding of social causality. Furthermore, it appears that each dimension of object relations is influenced by at least one form of childhood trauma. Nevertheless, the observed effects of these early experiences are complex and, in some instances, counter-intuitive. This study addressed some important questions and raised others about the specific effects of pathogenic early experiences on characteristics of object relations.

When early experiences induce an internal object world marked by expectations of unpredictability, capriciousness, rejection, and potential malevolence in the context of earnest emotional investment in others, depression or an aggressive interpersonal stance may result. Perhaps this pattern of object relations leaves one ill equipped to negotiate the interpersonal challenges of early adulthood, a period when emotional support and self-esteem are derived increasingly from peer relationships as the primacy of familial relationships fades. Although a strikingly similar pattern of object relations leads to both depression and aggression in young adulthood, it is depression and not aggression that may eventuate in suicidal ideation. This lends support for the psychoanalytic postulate that depression ensues when aggression is turned toward the

self. Pivotal questions remain regarding factors that influence the direction in which one's internal distress is expressed.

This investigation illuminated some of the pathways, including crucial and formerly unexplored intrapsychic avenues, to suicidal ideation in young adulthood and thereby may enhance our ability to predict and to prevent suicide in young people. Moreover, several intriguing questions have been raised that await illumination by future research.

A final important implication of this study is that the validity of psychoanalytic theory can be effectively explored outside the clinical setting. Although the confluence of the richness and complexity of psychoanalytic theory and the rigors of research methodology creates obstacles for psychoanalytically-informed researchers, obstacles from which this investigation also suffers, this effort has nevertheless demonstrated the potential gains to be realized from systematic research of psychoanalytic theory. At the present time, when psychoanalytic theory and technique are under fierce attack, such efforts are critical.

APPENDIX A

SUMMARY OF SCORS CODING RULES

	Complexity of Representations of People	*Affect Tone of Relationship Paradigms*	*Capacity for Emotional Investment*	*Understanding of Social Causality*
Principle	Self and others have clearly differentiated perspectives; people are seen as having stable, enduring, multi-dimensional traits with complex motives and subjectivity.	Social interactions are expected to be basically beningn and enriching, as opposed to profoundly malevolent or overwhelmingly painful.	Others are treated as ends rather than means, events are regarded in terms other than need gratification, and moral standards are developed and considered.	Attributions about the causes of people's actions, thoughts, and feelings are logical, accurate, complex, and psychologically minded.
Level 1	People are not clearly differentiated; confusion of points of view.	Malevolence, gratuitous violence, or gross negligence by significant others.	Need-gratifying orientation; profound self-preoccupation.	Non-causal or grossly illogical depictions of psychological and interpersonal events.
Level 2	Simple, unidimensional representations; focus on actions; traits are global and univalent.	Relationships are viewed as hostile, empty, or capricious but not profoundly malevolent; profound loneliness or disappointment in relationships.	Limited investment in relationships and moral standards; conflicting interests may be recognized; moral standards are concrete, unintegrated, or used to avoid punishment.	Rudimentary understanding of social causality; minor logic errors or unexplained transitions; simple stimulus-response causality.
Level 3	Minor elaboration of mental life or personality.	Mixed representations with mildly negative tone.	Conventional investment in people and moral standards; stereotypic compassion; guilt at moral transgressions.	Complex, accurate situational causality; some understanding of the role of thoughts and feelings in mediating action.
Level 4	Expanded appreciation of the complexity of subjective experience and personality, but life history, traits, and subjectivity are not fully integrated.	Mixed representations with neutral or balanced tone.	Maure, committed investment in relationships and values; mutual empathy and concern; commitment to abstract values.	Expanded appreciation of the role of mental processes in generating thoughts, feelings, behaviors, and interpersonal interactions.
Level 5	Complex representations with interaction of enduring and momentary psychological experiences.	Predominantly positive representations; benign and enriching interactions.	Autonomous selfhood in the context of committed relationships; carefully considered standards or concern for concrete people or relationships.	Complex appreciation of the role of mental processes in motivation; understanding of unconscious motivations.

Adapted from Westen (1990b) with permission.

APPENDIX B

THEMATIC APPERCEPTION TEST CARDS AND INSTRUCTIONS

Instructions: This is a task of imagination and story writing. I am going to show you some pictures, one at a time, projected on this screen, and you will make up as dramatic a story as you can for each picture. In your story, say what led up to the event shown in the picture, what is happening in the picture at the moment, what the people are thinking and feeling, and what the outcome is. Write your thoughts as they come to you. Are there any questions? You will have about five minutes for each story.

Descriptions of the ten TAT cards that were administered:

1: A young boy contemplates a violin.
Common themes: achievement, relationship with parents

2: Country scene. A young woman holding books stands in the foreground; in the background, a man works in a field and an older woman looks on.
Common themes: family relations, autonomy, compliance

3BM: A person lies huddled on the floor against a couch; a revolver is visible nearby.
Common themes: aggression, suicidal tendencies

4: A woman grabs the shoulders of a man, who turns away.
Common themes: male-female relationships

7GF: A woman and a girl holding a doll sit together on a couch. The woman speaks or reads to the girl, who looks away.
Common themes: mother-daughter relationship

6BM: A short elderly woman stands with her back to a tall young man, who is looking downward with a perplexed expression.
Common themes: mother-son relationship

8BM: A young boy looks straight out of the picture; the barrel of a rifle appears at one side, with the vague image of a surgical operation in the background.
Common themes: aggression, ambition

13MF: A young man stands with downcast head buried in his arm; behind him a woman lies on a bed.
Common themes: sexual conflicts

14: The silhouette of a person against a bright window.
Common themes: suicidal tendencies

15: A gaunt man with clenched hands stands among gravestones.
Common themes: fears about death, depressive tendencies

Picture descriptions adapted from Bellack (1993) and Groth-Marnat (1990).

APPENDIX C

TAT STORY FORM

Code: _____ Card No. _____

Remember to include in your story:

* what *led up* to the event shown in the picture.
* what is *happening* in the picture right now.
* what the characters are *thinking*.
* what the characters are *feeling*.
* what the *outcome* of the story is.

APPENDIX D

EARLY EXPERIENCES QUESTIONNAIRE

Complete this questionnaire as fully and accurately as you can. In addition to answering each question, feel free to include additional information in the margins if you would like. If you have any questions, please ask the experimenter. Remember that all your answers will remain strictly confidential.

gender _____ male _____ female age _____ years

race _____ White (non-Hispanic) _____ African-American
_____ Hispanic _____ Asian-American
_____ other _____

What is your major? _____

primary sexual orientation
_____ heterosexual _____ homosexual _____ bisexual

relationship status _____ single, not in intimate relationship
_____ single, in intimate relationship
_____ single, living with partner
_____ married
_____ separated, divorced, or widowed
_____ other _____

How many children do you have? _____

How frequently do you drink alcoholic beverages?
_____ never
_____ once or twice a month
_____ once or twice a week
_____ 3-4 times a week
_____ 6-7 times a week

Do you consider your alcohol use to be a problem for you?

0	1	2	3	4	5	6
not at all	somewhat		quite a bit	very much		extremely

Have you ever sought treatment for alcohol abuse? Yes No

How frequently do you use illegal or street drugs?

_____ never
_____ once or twice a month
_____ once or twice a week
_____ 3-4 times a week
_____ 6-7 times a week

Do you consider your drug use to be a problem for you?

0	1	2	3	4	5	6
not at all	somewhat		quite a bit	very much		extremely

Have you ever sought treatment for drug abuse? Yes No

Have you ever sought psychotherapy or counseling? Yes No
If Yes, what was the reason? _____
how long were you in therapy/counseling? _____
are you currently in therapy/counseling? Yes No

Have you ever been hospitalized for psychiatric difficulties? Yes No
If Yes, how many times have you been hospitalized? _____
reason for hospitalization(s): _____

Have your parents ever separated or divorced? Yes No
If Yes, how old were you when they separated? _____
how old were you when they divorced? _____
did you continue to have contact with your mother? Yes No
did you continue to have contact with your father? Yes No

For each of the following, indicate whether or not you have had this experience, and if so, how traumatic it was for you. If you have not had the experience, write '0' in the blank. If you have had the experience, use the scale below to rate how traumatic the experience was. If you experienced the event more than once, consider the impact of all the instances together.

1	2	3	4	5	6	7
not at all traumatic	somewhat traumatic			very traumatic		extremely traumatic

Death of a parent	_____	Death of a sibling	_____
Other important death	_____	Parents' divorce	_____
Life-threatening illness	_____	Serious illness	_____
Serious disability	_____	Home destroyed	_____
Rape by a stranger	_____	Rape by an acquaintance	_____

Primary caretakers are people you have lived with for at least one month who had responsibility for taking care of you. They may be your biological parents, stepparents, adoptive or foster parents, other relatives, or other people with whom you have lived. Do not include babysitters or others who were responsible for taking care of you only part-time.

How many primary caretakers have you had in your lifetime? _____

State your relationship to each of your primary caretakers (i.e, father, mother, foster mother, aunt, grandmother, etc.):

For the three periods of your life listed below, indicate the primary caretaker(s) you lived with. If you lived with more than one set of caretakers during any one period, indicate the amount of time you lived with each (either in percentage of time or length of time if custody was shared, or in months and years).

	ages 0-6	ages 7-12	ages 13-18
Both biological parents	_____	_____	_____
Biological mother only	_____	_____	_____
Biological mother & her partner	_____	_____	_____
Biological father only	_____	_____	_____
Biological father & his partner	_____	_____	_____
Adoptive parent(s)	_____	_____	_____
Foster parent(s)	_____	_____	_____
Total number of foster homes you have lived in _____			
Residential or group home	_____	_____	_____
Other (specify below)	_____	_____	_____

Who do you consider to be, or to have been, your most important **female parental figure**?

_____ Biological mother
_____ Step mother _____ Foster mother _____ Adoptive mother
_____ Grandmother _____ Aunt
_____ Other (specify) _____

How old were you when this person assumed a parental role in your life? _____ years _____ months

Do you continue to have contact with this person? Yes No
If No, at what age did you stop having contact with her? _____
what was the reason? _____

Is this person now living? Yes No
If No, how old were you when she died? _____
what was the reason for her death? _____

How important is (or was) this person in your life?

0	1	2	3	4	5	6
not at all	somewhat		quite a bit	very much		extremely

Indicate the extent to which you believe **this person** has (or had) experienced each of the following:

0	1	2	3	4	5	6
not at all	somewhat		quite a bit	very much		extremely

_____ Depression
_____ Psychiatric difficulties other than depression
specify: _____
_____ Alcohol use or abuse
_____ Illegal drug use or abuse
_____ Incarceration
_____ Suicidal thoughts, threats, or attempts
_____ Aggressive or violent behavior toward others
_____ Serious medical problems
_____ Other problems or difficulties
specify: _____

How many times has this person been hospitalized for mental, emotional, or psychiatric reasons? _____

To what extent have this person's difficulties had a negative impact on you?

0	1	2	3	4	5	6
not at all	somewhat		quite a bit	very much		extremely

Before beginning college, how many times did you have a **prolonged separation from this person** (i.e., **any** separation of **one month or more**)? _____

For each of these separations, indicate your age at the time, the length of the separation, including whether it was temporary or permanent, and the reason for the separation (i.e., divorce, her death, to attend overnight camp, travel, etc.).

	your age	length of separation	reason for separation
1.			
2.			
3.			
4.			
5.			

To answer the following questions, think about the separation from this person that was the **most painful or disruptive** for you. Mark that separation with a star (*) in the list above. Then answer each question below using the following scale. If you had no separations from this person, go on to the next page.

0	1	2	3	4	5	6
strongly disagree	disagree		neither agree nor disagree	agree		strongly agree

_____ 1. There was no one I could talk with about my feelings about the separation.
_____ 2. I had enough advanced warning about the separation.
_____ 3. After the separation, I seemed to feel anxious or nervous a lot of the time.
_____ 4. At the time, I understood the reasons for the separation.
_____ 5. I think I was very angry with her for not being with me.
_____ 6. I was satisfied with the amount of contact I had with her after the separation.
_____ 7. I felt lost without her.
_____ 8. I think the separation was good for me.
_____ 9. Even before the separation, I was often afraid I would be separated from her.
_____ 10. I think I blamed myself for the separation.
_____ 11. After the separation, I started to believe that other people would probably leave me too.
_____ 12. I was well taken care of during and after the separation.
_____ 13. I missed her very much when she was gone.
_____ 14. Before the separation, we were very close.
_____ 15. I was angry with myself because of the separation.
_____ 16. It was very hard for me to be apart from her.
_____ 17. If I felt badly about the separation, I seemed to get over it pretty quickly.
_____ 18. The separation changed my life for the worse.
_____ 19. After the separation, I started to have problems I never had before.
_____ 20. I never lost hope that I would see her again.

Who do you consider to be your most important **male parental figure**?

_____ Biological father
_____ Grandfather _____ Uncle
_____ Step father _____ Foster father _____ Adoptive father
_____ Other (specify) _____

How old were you when this person assumed a parental role in your life? _____ years _____ months

Do you continue to have contact with this person? Yes No
If No, at what age did you stop having contact with him? _____
what was the reason? _____

Is this person now living? Yes No
If No, how old were you when he died? _____
what was the reason for his death? _____

How important is (or was) this person in your life?

0	1	2	3	4	5	6
not at all	somewhat		quite a bit	very much		extremely

Indicate the extent to which you believe **this person** has (or had) experienced each of the following:

0	1	2	3	4	5	6
not at all	somewhat		quite a bit	very much		extremely

_____ Depression
_____ Psychiatric difficulties other than depression
specify: _____
_____ Alcohol use or abuse
_____ Illegal drug use or abuse
_____ Incarceration
_____ Suicidal thoughts, threats, or attempts
_____ Aggressive or violent behavior toward others
_____ Serious medical problems
_____ Other problems or difficulties
specify: _____

How many times has this person been hospitalized for mental, emotional, or psychiatric reasons? _____

To what extent have this person's difficulties had a negative impact on you?

0	1	2	3	4	5	6
not at all	somewhat		quite a bit	very much		extremely

Before beginning college, how many times did you have a **prolonged separation from this person** (i.e., **any** separation of **one month or more**)? _____

For each of these separations, indicate your age at the time, the length of the separation, including whether it was temporary or permanent, and the reason for the separation (i.e., divorce, his death, to attend overnight camp, travel, etc.).

	your age	length	reason for separation
1.			
2.			
3.			
4.			
5.			

To answer the following questions, think about the separation from this person that was the **most painful or disruptive** for you. Mark that separation with a star (*) in the list above. Then answer each question below using the scale below. If you have had no separations from this person, go on to the next page.

0	1	2	3	4	5	6
strongly disagree	disagree		neither agree nor disagree	agree		strongly agree

_____ 1. There was no one I could talk with about my feelings about the separation.
_____ 2. I had enough advanced warning about the separation.
_____ 3. After the separation, I seemed to feel anxious or nervous a lot of the time.
_____ 4. At the time, I understood the reasons for the separation.
_____ 5. I think I was very angry with him for not being with me.
_____ 6. I was satisfied with the amount of contact I had with him after the separation.
_____ 7. I felt lost without him.
_____ 8. I think the separation was good for me.
_____ 9. Even before the separation, I was often afraid I would be separated from him.
_____ 10. I think I blamed myself for the separation.
_____ 11. After the separation, I started to believe that other people would probably leave me too.
_____ 12. I was well taken care of during and after the separation.
_____ 13. I missed him very much when he was gone.
_____ 14. Before the separation, we were very close.

_____ 15. I was angry with myself because of the separation.
_____ 16. It was very hard for me to be apart from him.
_____ 17. If I felt badly about the separation, I seemed to get over it pretty quickly.
_____ 18. The separation changed my life for the worse.
_____ 19. After the separation, I started to have problems I never had before.
_____ 20. I never lost hope that I would see him again.

Have you ever known someone who talked about, threatened, or attempted **suicide**?
Yes No
If Yes, for each person, indicate your relationship to him/her, whether he or she ever attempted suicide, and whether he or she died from a suicide attempt.

relationship to him/her	attempted suicide?		died from suicide?	
_____	Yes	No	Yes	No
_____	Yes	No	Yes	No
_____	Yes	No	Yes	No
_____	Yes	No	Yes	No

Physical abuse is defined as actions of a parent or caretaker toward his/her child under the age of 16 that cause physical harm. These actions include slapping, hitting, stabbing, choking, beating, and restricting one's movements by tying or binding. Physical harm may range from bruises or scratches to injuries that require medical attention, including hospitalization.

Were you physically abused before the age of 16? Yes No
If Yes, answer the following questions. If No, go on to the next set of questions.
Briefly describe the physical abuse, including any medical treatment you received.

How old were you when you were first physically abused? _____
How often were you physically abused?
once rarely monthly weekly daily
If the abuse occurred more than once, how old were you when it ended? _____
How many people physically abused you? _____
What was your relationship to the person(s) who abused you?

To what extent do you feel you were psychologically or emotionally (as opposed to physically) harmed by the abuse?

0	1	2	3	4	5	6
not at all	somewhat		quite a bit	very much		extremely

Emotional abuse is defined as actions of a parent or caretaker toward his/her child under the age of 16, such as verbal assaults, rejection, hostility, ridicule, harsh or severe criticism, and inadequate support or nurturing, that cause emotional or psychological harm.

Were you emotionally abused before the age of 16? Yes No
If Yes, answer the following questions. If No, go on to the next set of questions.
Briefly describe the emotional abuse.

How old were you when you were first emotionally abused? _____
How often were you emotionally abused?

once	rarely	monthly	weekly	daily

If the abuse occurred more than once, how old were you when it ended? _____
How many people emotionally abused you? _____
Indicate your relationship to each of these people:

To what extent do you feel you were psychologically or emotionally (as opposed to physically) harmed by the abuse?

0	1	2	3	4	5	6
not at all	somewhat		quite a bit	very much		extremely

Sexual abuse is defined as any unwanted sexual encounter between a person under the age of 16 and another person at least 5 years older. Unwanted sexual encounters occur when someone exposes his/her genitals to you, masturbates in front of you, touches or fondles your body, rubs his/her genitals against your body, encourages you to touch his/her genitals, has oral sex with you, attempts to have intercourse with you, or has vaginal or anal intercourse with you.

Were you sexually abused before the age of 16? Yes No
If Yes, answer the following questions. If No, go on to the next set of questions.
Briefly describe the sexual abuse, including the type of sexual encounter(s) (i.e., fondling, oral sex, intercourse):

How old were you when you were first sexually abused? _____
How often were you sexually abused?

once rarely monthly weekly daily

If the abuse occurred more than once, how old were you when it ended? _____
How many people sexually abused you? _____
Indicate your relationship to each of these people, their gender, and their approximately ages at the time of the sexual abuse (if you're not sure about ages, take a guess):

At the time, how much did you feel pressured, coerced, or forced to take part in these sexual encounters?

0	1	2	3	4	5	6
not at all	somewhat		quite a bit	very much		extremely

To what extent do you feel you were psychologically or emotionally (as opposed to physically) harmed by the abuse?

0	1	2	3	4	5	6
not at all	somewhat		quite a bit	very much		extremely

Please feel free to use the rest of this page to comment on any of your answers above, or to add anything you would like about yourself, your life, or your experiences.

APPENDIX E

SUICIDE ATTEMPT QUESTIONNAIRE

Complete this questionnaire as fully and accurately as you can. Remember that all your answers will remain strictly confidential.

Have you ever made a **suicide attempt**, either a mild or serious one? Yes No
If Yes, complete this questionnaire. If No, go on to the next questionnaire.

How many suicide attempts have you made in your life? _____

If you have attempted suicide more than once, think about the most recent time you tried to kill yourself when you answer the following questions. If you have made one suicide attempt, think about what was happening when you made the attempt, and then answer the following questions.

How old were you at the time of the suicide attempt?

What did you do to try to kill yourself?

Why did you attempt suicide?

What was the reaction of other people to your suicide attempt?

Describe any psychological and/or medical treatment that you received after the attempt.

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