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The Effects Of Three Training Interventions On The Development Of Resilient Qualities In Adolescent Females

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THE EFFECTS OF THREE TRAINING INTERVENTIONS ON THE DEVELOPMENT OF RESILIENT QUALITIES IN ADOLESCENT FEMALES

BY

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ABSTRACT

The Effects of Three Training Interventions on the Development of Resilient Qualities in Adolescent Females

The effects of stress-inoculation training, assertiveness training, and empathy training on the development of resilient qualities were investigated in a sample of 82 female adolescents. Resilient qualities were identified as four levels of empathy (Fantasy, Empathic Concern, Perspective taking, and Personal Distress) as measured by the Interpersonal Reactivity Index (IRI) (Davis, 1980) and one level of separation-individuation as measured by the Healthy Separation subscale of the Separation-Individuation Test of Adolescence (SITA) (Levine, 1986). In addition, it was asserted that positive attachment experiences (Care) and negative attachment experiences (Overprotection), as measured by the Parental Bonding Instrument (PBI) (Parker, Tupling, & Brown, 1979), may be related to the development of resilient qualities. Subjects were matched on family status and randomly assigned to the Training, the Placebo (Support) group, or the No-Treatment Control group. A multivariate analysis of variance (MANOVA) used to examine the effects of attachment revealed that there is a significant relationship between positive attachment experiences (Care) and the development of empathy and healthy separation, F(2.76, df=5.00, p<.03). Findings were inclusive on the relationship between negative attachment experiences (Overprotection) and the development of empathy and healthy separation. After controlling for the effects of attachment, the effects of treatment (group) were nonsignificant, F(1.48, df=10.00, p<.09). Univariate F-tests of between-subject effects determined that subjects differed on the Perspective Taking subscale of the IRI, indicating that positive attachment may have an impact on one level of empathy, F(4.22, df=2, p<.02). Post hoc tests revealed that there was a significant difference on IRI Perspective Taking between the Training and Support groups, F=4.22, df=2, p<.02, suggesting that a supportive group experience may be more effective in promoting one level of empathy than the use of structured, semiautomated interventions. Limitations of length of sessions, time of day, and continuity of treatment were discussed. Recommendations included incorporation of training into the school curriculum, subject participation in designing the interventions, and role play as a method to foster assertive and empathic responses.
The author wishes to acknowledge Mr. Murray Blueglass, Mrs. Janet Donohue, Mr. Max Rigsbee, Ms. Susan Swenson, the staff of Mahwah High School, and the 82 young women who all contributed so much of their time and energy to help me realize my goal.
For my husband, Andrew, and my children, Justin and Sarah, whose love and resilient natures are a constant source of inspiration.

and

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CHAPTER I

Introduction

Resilience is conceptualized as a composite of stress resistant characteristics that include self-esteem, autonomy, a sense of personal competence fueled by the ability to take responsibility for one's actions, and a capacity to seek out and maintain fulfilling interpersonal relationships. Currently resilience is viewed more as a process that develops over time rather than an attribute that is transmitted through genetic endowment (Rutter, 1985).

To date, much of the research on resiliency has focused on the following elements: identifying demographic and personality characteristics of the stress-resistant individual (Luthar & Zigler, 1991; Garnezy, 1985; Masten, 1989), linking intergenerational processes to adaptive or maladaptive functioning (Fonagy, Steele, Steele, Higgitt & Target, 1994), describing the environmental origins of risk and adversity (Brooks, 1994; Radke-Yarrow & Brown, 1993), and explaining how protective processes facilitate positive coping styles (Rutter, 1993). Although these studies have generated an understanding of the crucial determinants of protective functioning, questions remain about possible ways to promote resiliency and how individual differences combine with psychological and social factors to favor such outcomes. It appears that simple main effects are not sufficient to explain the complex interplay of person-environment factors that influence the development of stress-resistant capacities (Compas, Hinden, & Gerhardt, 1995).
As a consequence of a shortage of information available on methods to foster resiliency, the current thrust of investigation has focused on preventive interventions which provide the skills for enhanced adjustment (Rutter, 1993). Cowen & Work (1988) state that, "Developing effective early preventive models to short-circuit negative spirals...can punctuate vividly the potential of a proactive health-building model for mental health" (p. 603). This study was designed in response to the urgent and singular need to ascertain what types of interventions can facilitate the development of stress-resistant capacities.

Background of the problem

Research studies identify three interrelated domains that contribute to the development of resilience - a child’s inner resources, a nurturing and balanced family, and a larger social environment offering additional support and nurturance. These three domains must exist in some combination with each other in order for the child to develop effective coping mechanisms that are protective against risk (Brooks, 1994; Anthony & Cohler, 1987; Garnezy & Rutter, 1983).

Throughout the literature, the quality of early relationships consistently emerges as the most critical element influencing a child’s capacity to mediate the effects of stress (Rutter, 1983). Egeland, Carlson, and Sroufe (1994) propose that the child comes to view the self as lovable and worthwhile and to experience mastery in the environment. The child develops confidence in the self and the ability to elicit positive responses from others through the developmental transactions of internal and external experience in an environmental context rather than as the result of inherent traits (p. 525).

Strong feelings of security originating in these early relationships influence the child’s internal state in such a way that shifts the relative balance of behavior from avoidance to
exploration, thereby offering opportunities for expanded interaction with one's environment and a greater sense of autonomy (Joffe & Vaughn, 1973).

Fulfillment of emotional needs early in life creates a sense of self-efficacy as well as establishing the foundation for intimate interpersonal relationships that are characterized by trust, security, cooperation, and empathic exchange. The capacity for empathy is a vital ingredient in developing social self-confidence and the potential to seek out and enjoy social interaction. Kremer & Dietzen (1991) suggest that the "ego strength embodied in the capacity for empathy serves as a foundation for relationships and also provides a basis for coping with stress and resolving conflict" (p. 961).

Another outgrowth of shared mutuality is the development of healthy assertion which seems to better equip the resilient child to solicit support from others and also to draw out something positive from stressful situations (Radke-Yarrow & Brown, 1993). By assuming realistic ownership for his/her achievements and demonstrating a sense of personal control over what is occurring in his/her life, the resilient child views mistakes as experiences from which to learn rather than occasions of defeat. Ultimately, the degree to which the child is able to take responsibility for his/her actions greatly impacts feelings of competence and self-esteem (Brooks, 1994).

Although some of the characteristics of resilience have been identified and connected to a developmental process, it remains unclear if this phenomenon can be fostered in individuals who have been deprived of positive attachment relationships. However, implementation of specific training interventions to determine whether resilient qualities can be promoted in individuals with a history of positive or negative attachment experiences is an area worthy of exploration. Based on the current conceptualization of the characteristics of resiliency, the three areas that have been linked to the development of
protective coping mechanisms are: 1) utilization of the relaxation response to moderate internal states of hyperarousal, 2) assertiveness training to cultivate personal responsibility and a sense of autonomy, and 3) empathy training to further effective social interaction.

The relaxation response has been described as the psychological and physiological opposite of the arousal or stress response (Benson, 1975). Physiologically it has been characterized by a decrease in metabolism, blood pressure, breathing, and heart rate. Psychologically it is associated with feelings of calmness and control and a "reduction of negative psychological symptoms [that have] frequently been linked to an increase in self-esteem and an increase in internal locus of control" (Benson, Komhaber, Komhaber, LeChanu, Zuttermeister, Myers, & Friedman, 1994, p.227). Interestingly, "[the] magnitude of the relaxation response-mediated reduction in psychological symptoms was comparable to those observed in patients who have been exposed to long-term psychotherapy" (Benson et al., 1994, p.227). Moreover, when relaxation training was paired with cognitive restructuring and assertiveness training there was a significant reduction in stress and anxiety on pre- and post-test measures (Kiselica, Baker, Thomas, & Reedy, 1994). Relaxation training has been documented in the literature as a well-known and effective cognitive-behavioral technique in treating depression, (Reynolds & Coats, 1984), stress (Hains & Szyjakowski, 1990; Hiebert & Eby, 1985), and adolescent behavior problems (Benson et al., 1994).

The use of assertiveness training as part of a program to enhance social skills has been shown to have a positive benefits for adolescent self-concept (Stake, DeVille, & Pennell, 1983), lowered self-abasement (Jackson, 1979), and improved locus of control (Waksman, 1984b). Nonassertive children have been described as 'withdrawn...shy, experienced difficulty communicating their anger, did not stand up for their rights, conformed to the
wishes of others, and experienced difficulty speaking clearly when frustrated" (Bornstein, Bellack, & Hersen, 1977, p.184). Especially in adolescence when there is a conflict between the pressure to conform and the desire to establish a unique identity, the ability to champion one's rights and to express both angry and positive feelings, is vital to the facilitation of a sense of personal self-efficacy (Bornstein, et al., 1977).

Although social skills training often emphasizes the importance of assertiveness and personal responsibility for healthy functioning, the capacity for empathy is a vital component in one's ability to develop successful relationships. While most psychologists agree with the importance of empathy, its definition varies. Schafer (1959) conceptualizes empathy as "the inner experience of sharing in and comprehending the momentary psychological state of another person" (p.962). Some authors accent the cognitive component of "understanding" the situation of another person (Hogan, 1969) while others underscore the affective component of "feeling" with another person (Mehrabian & Epstein, 1972).

However, the question of whether empathy can be taught remains a source of controversy. Throughout the literature there is a glaring absence of studies which have attempted to operationalize and to teach the particular skills inherent in the empathic response (Pecukonis, 1990). Yet, Hatcher, Nadeau, Walsh, Reynolds, Galea, & Marz (1994), Pecukonis (1990), and Chalmers & Townsend (1990) determined that training can be a crucial factor in the development of one's ability to listen and communicate empathically. It appears, therefore, that some forms of training can augment and shape the potential for empathic relatedness in a variety of different populations.
Theoretical Rationale

The theoretical rationale for this study was derived from Hartmann’s (1964) formulations on ego psychology. Hartmann posits that the infant is born with the apparatuses of primary autonomy that provide the framework for adaptation between the organism and its environment. Within an average expectable environment, created in the context of the mother-child dyad, the infant begins to develop the internal structures that will facilitate increased mastery over the environment. Through the process of fitting together (Hartmann, 1964) with the external world, the infant develops the capacity to regulate equilibrium by means of autoplasic modifications of the self and alloplastic modifications of the environment. The reciprocal relationship created through this interaction forms the basis for the first social relations that are crucial for maintaining biological and psychological equilibrium.

Ultimately, as newly differentiated skills are integrated at a higher, more complex level, the infant develops the ego functions necessary to execute the tasks that were originally performed by more primitive means. With his emphasis on the conflict-free sphere of the ego as the organizing foundation for fitting together (Hartmann, 1964) of internal and external experiences, Hartmann laid the foundations for conceptualizing adolescent development as influenced by, but independent of psychosexual demands (Josselson, 1988). According to Hartmann, "Evolution...is a 'process of progressive 'internalization" (p. 57) which requires further adaptive accommodations to introduce new configurations and equilibria that facilitate "increased independence from [the] environment" (Hartmann, 1964, p.40).

In the context of this study, resilient adaptation, or the ability to develop stress-resistant capacities, was investigated through the constructs of autonomy and empathy.
Based on Hartmann's theoretical framework, it is hypothesized that the facility to develop protective coping mechanisms can be fostered through self-regulatory activities, the ability to inhibit negative responses by assertively modifying one's environment, and the capacity to effectively and cognitively understand the emotional experiences of others. Furthermore, the process of fitting together within a nurturing parent-child dyad is considered to be a positive predictor of stress-resistant adaptation.

Statement of the Problem

The first purpose of this study was to determine whether the capacity for resilience could be fostered in adolescent females in a school setting. Specifically, this researcher chose to investigate whether the following three independent variables: a) the relaxation component of stress-inoculation training, b) assertiveness training, and c) empathy training had any measurable change on the two dependent variables, autonomy and empathy.

The second purpose of this study was to determine if two covariates, positive and negative attachment experiences, were significant predictors of the two dependent variables, autonomy and empathy.

Significance of the Study

As personality research has shifted from focusing on pathological processes to emphasizing adaptive functioning, the exploration of resilience has become particularly significant. Many studies have centered on the identification and roots of resilient qualities but have not attempted to determine if they can be fostered and/or augmented through specific psychological interventions (Masten, 1989; Werner, 1992; Egeland, Carlson, & Sroufe, 1993; Rutter, 1993; Brooks, 1994). This study was the first to assess the efficacy of a combination of stress inoculation training, assertiveness training, and empathy training on
selected resilient capacities in a sample of adolescent females using Ego Psychology as a theoretical foundation.

Although much has been theorized about the interplay of personality characteristics and environmental factors on an individual's capacity for stress reduction, little empirical evidence exists which evaluates and quantifies this relationship. While previous studies have hypothesized about a connection between positive nurturing experiences and resilient qualities (Fonagy, et al., 1994), none have attempted to measure the interaction between attachment and autonomy or attachment and empathy.

Previous studies exploring the concept of resilience have centered primarily on children of latency age or younger from low socioeconomic groups in urban environments as the population criteria (Cowen, Wyman, Work & Iker, 1995; Barbarin, 1998; Radke-Yarrow & Brown, 1993). Therefore, it appears from a review of the literature that researchers consider resilience to be an early developmental aptitude rather than a potential capability that transcends the life cycle. Using a sample of adolescent females, this study will attempt to demonstrate that with the appropriate interventions, the cultivation of resilient capacities is not confined to a particular developmental stage, but can be nurtured in older children as well. In light of the specific nature of female adolescent development, understanding resilience in a gender-related context represents a significant contribution to the psychological literature while paving the way for future studies on both gender and multicultural aspects of resiliency.
Hypotheses

The following hypotheses were proposed for testing within the present study:

1. Subjects who receive treatment will have a significantly higher score on the empathy scale than subjects who receive no treatment, or subjects who receive a placebo treatment.

2. Subjects who receive treatment will have a significantly higher score on the healthy separation subscale than subjects who receive no treatment, or subjects who receive a placebo treatment.

3. A significant relationship exists between high Care scores on a measure of attachment and high scores on the empathy scale and high scores on the healthy separation subscale.

4. A significant relationship exists between high Overprotection scores on a measure of attachment and low scores on the empathy scale and low scores on the healthy separation subscale.

Definition of Terms

1. Attachment is defined as the formation of an enduring affectional bond of substantial intensity between an infant and caregiver which shapes the core of intrapsychic object representations that guide the emotional and cognitive development of the child into middle childhood and throughout the life cycle (Bowlby, 1969).

The operational definition of positive parent-child attachment is a high score on the Care dimension and a low score on the Overprotection dimension of the Parental Bonding Instrument (PBI) (Parker, Tupling, & Brown, 1979) (Appendix A). The operational definition of negative parent-child attachment is a low score on the Care dimension and a high score on the Overprotection dimension of the Parental Bonding Instrument (Parker, et al., 1979)
2. Separation-individuation is conceptualized as a healthy progression through the vicissitudes of the childhood separation-individuation process that includes
the resolution of conflicts associated with the adolescent separation-individuation process, particularly in terms of tolerance for both dependency and independence needs, capacity for intimacy without loss of autonomy, and appreciation of both similarities to and differences from significant others" (Levine, 1986, p. 78).

The operational definition of separation-individuation is a score on the Healthy Separation subscale of the Separation-Individuation Test of Adolescence (SITA) (Levine, 1986) (Appendix B) which measures the level of one's autonomous functioning, independent of parental control or manipulation.

3. Empathy is defined as a twofold process which consists of an affective reaction stimulated by the perceived emotional state in another person (Freud, 1915; Mehrabian & Epstein, 1972) and a process of systematically shifting from participating in the emotional experience of another person back to observing and responding to this emotional involvement (Hogan, 1973).

The operational definition of empathy is a total score on the Interpersonal Reactivity Index (IRI) (Davis, 1980) (Appendix C) which measures the construct of empathy on four dimensions: 1) perspective-taking, 2) fantasy, 3) empathic concern, and 4) personal distress.

4. Stress Inoculation Training is an anxiety management strategy which teaches cognitive-behavioral, anxiety-reduction coping skills through the use of progressive muscle relaxation, cognitive restructuring and assertiveness training (Meichenbaum, 1985).

Stress inoculation training (Appendix D) is based on the format of Meichenbaum's (1985) stress inoculation training model that includes three overlapping phases: 1) education in the conceptionalization and utilization of muscle relaxation, 2) training in
progressive muscle relaxation, 3) application of the techniques of progressive muscle relaxation to real anxiety-provoking situations (Kiselica, et al., 1994).

5. Assertiveness Training is adapted from the behavior modification approaches set forth by Wolpe (1969), Wolpe and Lazarus (1966), and Bandura (1969). Defined as "a subcategory of social skills in which the emphasis is on the...ability to express both positive and negative feelings in the interpersonal context without suffering consequent loss of social reinforcement" (Bornstein, et al., 1977, p.184) or as a way of "expressing one's rights and opinions with respect for the rights of others" (Wise, Bundy, Bundy, & Wise, 1991, p.233).

Assertiveness training (Appendix E) is modeled on a design by McFall and Lillesand (1971) using a standardized, semi-automated procedure in which subjects are instructed to make covert assertive responses to five stimulus situations. Following each stimulus interaction, subjects are coached by the narrator in what constitutes a good assertive response and then instructed to covertly adjust their responses based on the informed directives. Training exercises were selected from a study by McFall and Lillesand (1971) and from an assertiveness training manual by Galassi and Galassi (1977, 1985).

6. Empathy Training is a method designed to improve "awareness of how interpersonal information is selected, delivered, received, and analyzed [which] may lead to an improved synthesis in the understanding of another's perspective or feelings" (Pecukonis, 1990, p.63).

Empathy training (Appendix F) is modeled on a combination of designs by Stone & Vance (1976) and Uhlemann, Lea, & Stone (1976). The researcher utilized videotape modeling and detailed instructional training to increase both affective and cognitive empathic responses. Subjects view four videotapes demonstrating ineffective and effective examples of empathic responses. After each modeling situation, videotaped instructions are
provided which consist of directives underscoring the cognitive and affective components of both negative and positive empathic responses.

**Limitations of the study**

Although the researcher attempted to adhere to the prescriptions for internal and external validity through random sampling and random assignment, selection of reliable instruments of measurement, and a structure and design that controls for extraneous variables, there are certain conditions inherent in the experimental process which may limit the generalizability of the results.

1. Disadvantages of a posttest only design include

   the inability to ensure that groups are equivalent on the pretest, to match subjects pretest performance prior to random assignment...to study the relation between pretest standing and behavior change...to evaluate differential attrition across groups, and reduced statistical power (Kazdin, 1992).

2. Without a longitudinal test assessment, the stability of treatment cannot be measured over time.

3. Stimulus characteristics of the setting such as environmental factors, experiment bias, or other features of the stimuli to which the subjects are exposed may confound the results (Kazdin, 1992).

4. Hawthorne Effect. The knowledge of a subject's participation in an experiment and the accompanying attention one receives may be an important motivating factor in performance (Kazdin, 1992).

5. Diffusion or imitation of treatment may inadvertently be included in the placebo group.

6. A fatigue factor may emerge due to the 90-minute post-assessment session.
7. The paucity of normative studies using the Interpersonal Reactivity Index (Davis, 1980) with an adolescent population may limit generalizability of results.
CHAPTER II

Review of related literature

Through a review and analysis of the psychological literature, this researcher will attempt to provide theoretical and empirical foundations for each of the dependent and independent variables in this study. The independent variables are: (a) stress-inoculation training, (b) assertiveness training, and (c) empathy training. The dependent variables are: (a) separation-individuation and (b) empathy, and the covariate is attachment.

Independent Variables

Attachment

In reviewing the literature on resiliency, positive attachment experiences emerge as a predominant factor influencing one's capacity to develop stress-resistant capacities (Brooks, 1994). Bowlby's (1969) seminal work on attachment emphasizes the ethological foundations of proximity-seeking behaviors that establish a mutual bond between infant and caregiver. Secure attachment, emerging out of a consistent and sensitive dyadic union, allows for active exploration of the environment that is balanced by available contact with the attachment figure. Ainsworth, Blehar, Waters, & Wall (1978) subjected the principles of attachment theory to empirical study that resulted in a clear delineation of different styles of mother-child interactions. Mental representations of these experiences create an internal working model of the self that becomes the basis for future interpersonal relationships (Ainsworth, et al., 1978; Main, Kaplan, & Cassidy, 1985). While positive attachment experiences promote security and encourage independence (Sroufe & Waters, 1977; Kobak, & Scoeery, 1988), significant associations have been found between insecure
attachment in infancy and various forms of psychopathology in childhood and later life (Ainsworth et al., 1978; Belsky & Cassidy, 1994). Allen, Aber, and Leadbeater (1990) propose that hostility and insecurity in children's models of themselves in attachment relationships may produce an enduring foundation of risk that leads to a variety of age-specific manifestations of problems such as childhood antisocial behavior, difficulty associating with peers, and heightened aggressiveness over the course of development (Loeber & Dishion, 1983; Patterson, 1986; Dumas, Gibson, & Albin, 1989).

Rather than existing as a static trait, attachment serves an organizing function which is both stable and flexible, influenced by context, and subject to individual differences (Sroufe & Waters, 1977). Bowlby (1977) conceptualizes attachment as a behavioral descriptor that is pervasive throughout childhood and adolescence rather than an experience confined exclusively to the earliest months of life. Even when flawed or painful, attachment remains operative and exists as a powerful construct in development (Salzman, 1990). Currently accepted as a dynamic, evolving process, attachment functions as an important determinant of psychological well-being over the entire human life-span. (Weintraub, Brooks, & Lewis, 1977; Lerner & Ryff, 1978; Kahn & Antonucci, 1980; Lichtenberg, 1996).

Rice's (1990) meta-analytic review of attachment in adolescence surveys 28 studies on adolescent attachment based on Bowlby's attachment theory. The process of constructing a narrative review involves a description of methodologies and the utilization of inferential statistics such as the Pearson r and effect size analyses to quantify the impressions and augment the validity of the article's summary formulations. Rice concludes that while these studies make important contributions to existing theories of human development, the external validity of findings is limited by reliance on correlational generalizations rather than longitudinal research.
Widespread interest in expanding the study of attachment beyond early childhood development to include adolescent (Parental Bonding Instrument, Parker, et al., 1979) and college populations (Parental Attachment Questionnaire, Kenny, 1987; Attachment Style Inventory, Sperling, Berman, & Fagan, 1996; Continued Attachment Questionnaire, Berman, Heiss, & Sperling, 1994) has resulted in the creation of instruments to measure the nature of feelings towards attachment figures. Greenberg, Siegal, & Leitch (1983) explored the nature and quality of adolescents' attachments to parents with a newly developed Inventory of Adolescent Attachments (IAA) in a sample of 213 adolescents, ranging in age from 12 to 19 with a mean age of 15.4 years. Using an analysis of covariance test, a significant interaction effect, $F(1,190) = 6.1$, $p<0.02$, was evidenced, indicating that a high-quality affective relationship with parents mediates the effect of life stress on the measure of self-concept. Further, a hierarchical regression model revealed a significant correlation between the quality of attachment to parents and measures of well-being ($F=13.2$, $p<.001$). Limitations of this study included use of an unvalidated instrument to make generalizations across a broad age range that does not account for the influence of adolescent developmental changes on the quality of attachment relationships.

Armsden and Greenberg (1987) reviewed the reliability of The Inventory of Parent and Peer Attachment (IPPA) in a sample of college students ($n=93$) with a mean age of 18.9 years. Study I disclosed a two factor structure for the inventory with items loading on either Factor I, assessing parent attachment, or Factor II, assessing peer attachment. In a second sample of 86 college students (mean age = 18.6), one year and five months later, the authors investigated the relationship between qualitatively different attachments to parents and peers with proximity and well-being. Using hierarchical regression analyses, positive and negative life change and Peer and Parent Attachment all significantly predicted both
self-esteem (59% of the variance) and life satisfaction (53% of the variance). Separate set of t tests for parent and peer comparison groups disclosed that the High Security (HS) parent-attachment group was significantly different from the Low Security (LS) group in self-esteem, life satisfaction, and proximity seeking. Further, the LS parent attachment group reported significantly more negative life change than the HS group (t = 2.04, df = 55, p < .05, two-tailed) with accompanying negative psychological symptomatology. A disproportionate number of females (54) to males (32) within a sample of White middle class undergraduate students limits generalizability of results to a more representative adolescent population.

A study by Williams and McGee (1991) assessed adolescents' self-perceptions of competencies (self-esteem, self-efficacy, or internal locus of control) in different life skills using a sample of 960 adolescents at age 15 years who had been evaluated at two-year intervals since birth using medical, developmental, and behavioral measures. Although the mean scores the on Strengths Questionnaire (Williams & McGee, 1991) were not significant for boys (14.9) and for girls (14.4), the findings revealed that adolescents view themselves as competent in a variety of areas with girls' strengths less broadly based than boys'. Regression analyses determined significant correlations for girls between scores on the parental attachment scale of the IPPA (Armsden & Greenberg, 1987) (r = .28, p < .05) and number of physical activities (r = .18, p < 0.05) as the best predictors of strengths. Use of the newly developed Strengths Questionnaire, an abbreviated version of the IPPA, and a modified version of the Mental Health Interview (Costello, Edelbrock, Kalas, Kessler, & Klaric, 1982), all weakly validated instruments, creates some doubts about the spurious nature of the results.

Kobak, Cole, Ferenz-Gillies, and Fleming (1998) used the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985) in Study 1 to differentiate between secure/anxious
and deactivating/hyperactivating attachment strategies (AAI strategies associated with emotion regulation during mother-teen problem-solving). Study 2 examined aspects of mother-teen problem-solving to predict teens' AAI strategies in a sample of 48 mother-teen dyads (Females = 27, Males = 21, Mean age = 15.7 years). Q-sort description determined that the security/anxiety dimension effectively differentiated secure from anxious subjects while the deactivation/hyperactivation dimension differentiated between the dismissing and preoccupied attachment groups. Zero order correlations and a two-step regression procedure revealed that males and females with secure strategies engaged in interactions characterized by less dysfunctional anger (r = -.45, p < .05 and r = -.36, p < .05, respectively) and less avoidance of problem-solving in the interaction (r = -.50, p < .01, r = -.29, respectively, though not significant). Females with deactivating attachment strategies had interactions characterized by high levels of maternal dominance which may serve as a means to avoid rejection while maintaining relatedness with mothers (r = -.39, p < .05). Males with deactivating attachment strategies demonstrated significantly high levels of dysfunctional anger (r = -.53, p < .01). The authors concluded that constructive regulation of emotion during problem-solving facilitates task accomplishment while allowing an individual to move toward greater autonomy within the secure parent-teen relationship. Although the use of Q-sort prototypes were devised specifically for this study, the methodology and the statistical analyses make the findings worthy of consideration in a broader population.

Kobak, Sudler, & Gamble (1992) utilized a developmental pathway analysis to determine the links between the role of attachment processes and the self-reports of adolescent depressive symptomatology in a sample of 48 mother-teen dyads (Mean age for teens = 15.7 years). Significant correlations were found between life stress, insecure attachment strategies, and depressive symptomatology, F = 6.27, p < .01. Moreover, the
correlation between maternal dominance during problem-solving and depressive symptoms was higher in females ($r = .31$, $p < .10$), leading to the conclusion that a diminished capacity for healthy assertion negatively impacts feelings of mastery and autonomous functioning. The scale used to assess mother-teen problem-solving and the AAI Q-set to assess attachment strategies were both developed by the authors for use in this study and had not been validated in previous investigations.

The relation of attachments and supports to adolescent well-being and school adjustment (Cotterell, 1992) was evaluated in a sample of 57 adolescents (Males=29, Females=28, Mean age=15 years 11 months) using the Inventory of Parent and Peer Attachments (IPPA; Armsden & Greenberg, 1987) and the Social Relations Questionnaire (SRQ: Blyth, Hill, & Thiel, 1982). Results indicated that girls' well-being and academic adjustment were associated with attachment to teachers ($r = .60$, $p < .001$) and parents ($r = .45$, $p < .001$) while boys well-being was associated more with attachment to friends ($r = .47$, $p < .001$) than to teachers ($r = .41$, $p < .01$) or to parents ($r = .32$, $p < .05$). A weakly correlated but similar pattern for academic outcomes was evidenced for boys. Small sample size with modifications and additions to the IPPA and the SRQ weaken the external validity of this study.

The influence of psychological separation and parental attachment on the career development of adolescent women was studied by O'Brien (1996) using the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) and the Psychological Separation Inventory (PSI; Hoffman, 1984) in a sample of 282 high school females. Canonical correlation analysis to determine if women who were attached to their parents and moving toward separation and individuation, demonstrated career self-efficacy and career orientation congruent with their interests and abilities, revealed a moderate degree
of attachment to mother (.51) and moderate negative loadings on functional (-.58), emotional (-.41), and attitudinal (-.63) independence from mother and attitudinal independence from father (-.32). Multivariate semipartial analyses resulted in a non-significant model for attachment when controlling for separation but a significant model for separation when controlling for attachment (Pillai's V=.19, F(32,1092)=1.72, p=.01). The author suggested that the significant correlations between the measurements of separation and attachment may have obscured a clear differentiation between the two constructs, thereby, confounding the significance of the results.

Quintana and Lapsley (1987) investigated: 1. the concurrent relation between adolescent attachment to parents and the achievement of ego identity and 2. the contribution of parental control to the formation of attachment and the acquisition of ego identity in a population of 100 college freshmen (Males=77, Females=24). Path estimates assessed by z-tests determined that: 1. parental attachment is positively related to Communication (.843) and Trust (.956) and negatively related to Alienation (-.698) 2. moderately large and negative weightings between maternal control (-.369, p<.05) and paternal control (-.339, p<.05) and parental attachment 3. a substantial negative estimate between paternal control and ego identity (-.690, p<.05), suggesting that paternal control strongly inhibits ego identity and 4. a weak link between attachment and ego identity (.124). Overall, the structural equations analysis revealed a model that was a good fit for the data, thereby, supporting a dynamic and adaptive view of attachment across the lifespan. A disproportionate number of males to females limit generalizability of results.

Papini, Roggman, and Anderson (1991) examined the emotional distancing and buffering hypothesis in a sample of 231 seventh graders (Females=133, Males=98) using the Pubertal Developmental Scale (PDS; Petersen, Crockett, Richards, & Boxer, 1988), the
Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987), the Child Manifest Anxiety Scale (CMAS; Reynolds & Richmond, 1978), the Child Depression Inventory (CDI; Kovacs, 1981), and the Family Functioning Scales (FFS; Bloom, 1985). Analyses of variance determined that adolescent perceptions of attachment to mother were unrelated to adolescent pubertal status ($F[2,225]=1.91$) and gender ($F[1,225]=1.64$) while adolescent perceptions of attachment to fathers were significantly related to pubertal status ($F[2,225]=3.45, p<.05$) and gender ($F[2,225]=9.95, P<.01$), thereby, supporting the belief that greater pubertal maturity is characterized by less perceived attachment with parents. The buffering hypothesis was also upheld in that adolescents who perceived greater attachment to parents reported less depression, social anxiety, and more positive perceptions of family expressiveness and cohesion. These findings seem to validate the view that individuation is facilitated when adolescents feel free to express themselves within a family context characterized by emotional connectedness. A longitudinal study by Papini and Roggman (1992) investigating the same variables at three assessment periods over nine months, further supported the buffering effect of parent-adolescent attachment for adolescent feelings of competence and emotional well-being. Additional replication studies and longitudinal investigations across adolescent developmental stages would give further credence to these results.

Ryan and Lynch (1989) reexamined the construct of 'emotional autonomy' advanced by Steinberg and Silverberg (1986) as representative of emotional detachment from parents rather than as a measure of either autonomy or independence. Using a sample of 148 seventh grade adolescents (Females=73, Males=75), Study 1 determined that on the Emotional Autonomy Scale (EA), emotional autonomy was negatively associated with quality of attachment to parents (Males, $r=-.36, p<.001$) (Females, $r=-.45, p<.001$). In Study
2, a high school sample of 193 students from grades 9-12 (Females = 95, Males = 98) revealed that emotional autonomy is negatively associated with adolescent reports of parental acceptance ($r = -0.41$, $p < .001$), suggesting that EA can be interpreted as a problem in attachment representing a lack of the adolescents' sense of their parent's love and acceptance. Using a sample of 104 undergraduates (Females = 63, Males = 41), Study 3 found that subjects high on EA evidenced lower scores ($r = -0.23$, $p < .05$) on the Separation-Individuation Inventory (SII; Christenson & Wilson, 1985). Finally, on the Blatt Object Representation Scale (BORS; Blatt, Chevron, Quinlan, & Wein, 1981) administered to a subsample of 58 undergraduates, the results indicated that parental nurturance was negatively associated with EA ($r = -0.58$, $p < .01$) and positively associated with lovability ($r = -0.56$, $p < .01$), supporting the view that EA indexes an experience of low parental nurturance and the absence of an affectional tie with parents. Although this is an excellent study, the SII was designed to assess pathology in the separation-individuation process, making some of the results irrelevant for a normal population of adolescents.

Pederson (1994) evaluated the quality of parental attachments using a shortened, 20-item version of the Parental Bonding Instrument (Parker, et al., 1979) in a sample of 573 Norwegian adolescents aged 15-19 (Males = 276, Females = 306) at two intervals, eight months apart. Subjects were assigned to one of four groups: symptom-free, anxiety/depression, delinquents, and delinquents with anxiety/depression. Results of four ANOVAs for care and control by father and mother determined that the symptom-free group reported high care and low control and was significantly different from the other three groups with regard to father's care ($F = 12.0$, $df = 3$, $p = 0.000$) and mother's care ($F = 9.7$, $df = 3$, $p = 0.000$). Stepwise canonical discriminant analyses (with a $p<0.10$ increase in Rao's V) revealed that poor care by father most strongly characterizes the group with
anxiety/depression (22.6) as compared to those without symptoms, and poor care by mother characterizes those with delinquency and a combination of the two symptoms (24.1). The reliability of this study is undermined by the lack of information regarding the instruments used to assess anxiety/depression and the methodology

**Relaxation Phase of Stress-Inoculation Training (SIT).**

Stress-inoculation training has been documented in the literature as a valuable resource for psychoeducational and preventive programs focused on developing coping skills needed for anxiety reduction (Deffenbacher, 1988; Huebner, 1988; Meichenbaum, 1985; Meichenbaum & Deffenbacher, 1988). Most research studies have been aimed at adults with a paucity of investigations focusing on normal populations of children and adolescents. This review will examine only those articles which report preventive approaches using progressive relaxation techniques and self-monitoring SIT with healthy adolescents.

Relaxation training is a relatively new, and somewhat unconventional, therapeutic intervention that appears to be most often used with children and adolescents to alleviate symptomatology associated with recurrent headache (Engel, 1993; Engel, Rapoff, & Pressman, 1994; Larsson & Carlsson, 1996); asthma (Vazquez & Buceta, 1993); aggressive and resistant youth (Davis & Boster, 1993); depressive disorders (Wood, Harrington, & Moore, 1996); attention-deficit/hyperactivity disorder (Calhoun, Fees & Bolton, 1994); overanxious disorder (Eisen & Silverman, 1993) and test anxiety (Sud & Prabha, 1995; Doan, Plante, & Digregorio, 1995) but not commonly used by school counselors as a treatment component for adolescent behavior problems (Laselle & Russell, 1993).

Richter (1984) assessed methodological issues and outcome studies to determine the efficacy of relaxation training techniques in the treatment of childhood disorders. Shortcomings included lack of appropriate and meaningful dependent measures, reliance
on taped instructions rather than live presentations, inadequate supplementary environmental support, and insufficient long-term follow-up. Individual versus group presentation was not found to have any significant difference on efficacy of results. The author concluded that when presenting problems and treatment objectives are clearly defined, relaxation training combined with other forms of treatment and accompanied by additional supports, appears to be a cost-effective method of treatment that is at least as effective as other approaches for a variety of learning, behavioral, and physiological disorders.

In another review of self-induced relaxation training, Margolis (1990) described positive effects on reading achievement, attention, hyperactivity, impulsivity, aggressiveness, and self-concept. Similar methodological concerns as those summarized by Richter (1984) included too few training sessions, little follow-up, vaguely described treatments, no longitudinal examination of cumulative effects, inadequate sample size, and failure to establish a criterion for the degree of relaxation achieved by participants. However, despite these caveats, Margolis (1990) maintained that sufficient research supports the proposition that relaxation training can be both an effective and efficient treatment intervention when enhanced by skill training over an extended period of time.

Chang and Hiebert (1989) reviewed 72 relaxation studies with children, outlining types of relaxation training and areas of intervention. Contradictory results appeared to emanate from inadequate information on how closely children adhered to training procedures in the home practice regimen and the degree of relaxation achieved by the subjects receiving training. In those studies where these types of data are reported, the results tend to be more supportive. To improve efficacy of results, the authors recommended that relaxation procedures be designed to treat appropriate problems within the context of purposeful
guided instruction under the supervision of adults who will encourage practiced application of acquired skills. Future studies must address methodological issues such as inclusion of adequate controls, confounded and unspecified treatments, and proper assessment of skill acquisition.

Each of the previous critiques of relaxation training, focused on the use of procedures in a remedial context rather than within a context that would prevent the occurrence of common stress-related problems. Hiebert and Eby (1985) evaluated the effects of teaching relaxation training as a stress-preventive coping strategy within a regular classroom context. Twenty-two 12th grade students practiced physiological self-monitoring procedures accompanied by progressive and autosuggestive relaxation tapes over a six-week period. Significant reductions were evidenced on the State-Trait Anxiety Inventory (STAI; Spielberger, 1968) in state anxiety (Pretest mean = 39.79 versus Posttest mean = 30.58) and trait anxiety (Pretest mean = 41.72 versus Posttest mean = 34.39). Reductions were also observed on all subscales of the Symptoms of Stress Inventory (SOSI; Leckie & Thompson, 1979) except neural. Small sample size, lack of a control group, and direct contact by the first author with the treatment group resulted in a poorly designed study with little empirical significance.

A six-week, 45 minute weekly transition training program was evaluated by Jason and Burrows (1983) using three types of coping strategies, including relaxation, cognitive restructuring, and problem-solving in a sample of 27 experimental group subjects and 30 control group subjects (Females=42; Males=15). Multivariate posttest analyses on a modified version of a self-efficacy test designed by Bandura and Adams (1977), the Irrational Beliefs Test (IBT; Jones, 1968), the Life Experiences Survey (LES; Sarason, Johnson, & Siegel, 1978), and the Social Support System Rating Scale (Cauce, Felner,
Ginter, & Primavera, 1979) revealed significant experimental versus control differences among the variables (F (11,40)=2.84, P<.01). Chi square analysis indicated that cognitive restructuring statements were the only coping strategy that achieved significance for the experimental group. Based on the small sample size and the 11 dependent variables assessed, a multivariate analysis was not a suitable statistical test to assess significance of results.

Guyer and Guyer (1984) compared three modes of relaxation induction: 1. a condensed version of the pioneering relaxation methodology developed by Jacobson (1938) recorded in the subject's own voice 2. an identical sequence recorded in the voice of a therapist of the same sex 3. a taped music sequence, in a sample of 48 normal high school students ranging from 16 to 19 years (Males=24, Females=24). A one-way analysis of variance yielded no significant difference between the treatment and control groups on any of the three dependent self-report measures: 1. the Adjective Checklist (Gough & Hielbrun, 1980) 2. the State-Trait Anxiety Inventory (Speilberger, 1968) 3. the Profile of Mood States (McNair, Lorr, & Droppleman, 1981) or the three dependent biological measures: 1. blood pressure 2. finger temperature 3. pulse rate. The authors concluded that the lack of significant results could be attributed to two factors: 1. emotionally healthy adolescents may be better able to deal with anxieties by accessing both personal and community resources and 2. since the bulk of research has been geared towards persons with emotional problems, little is known about the effect different therapies may have on emotionally healthy adolescents. In general, because this study adhered to the rigors of good experimental research, the conclusions are worthy of consideration when designing research questions for future studies.
Effects of labeling passive relaxation techniques as "hypnotic relaxation" or as "relaxation training" on self-reported indices of relaxation was examined in a sample of 64 subjects ranging from 17 to 19 years (Long, 1992). An ANCOVA revealed a significant interaction between label and gender, F(1,53)=5.33, p=0.025 with a main effect for label approaching significance, F(1,53)=3.37, p=0.059. Post hoc comparisons indicated that label had no significant effect for females while males reported treatments labeled "hypnotic relaxation" as significantly more relaxing when labeled relaxation training, indicating that labeling may enhance self-reported relaxation. The Therapy Attitude Questionnaire (TAQ) designed by the author to measure subjects' attitudes toward hypnosis and relaxation training and a modified version of the Intervention Credibility Questionnaire (ICQ; McGlynn, Kinjo, & Doherty, 1978) are not validated instruments to assess attitudes towards relaxation giving rise to questions regarding the generalizability of results to other populations.

Kiselica, Baker, Thomas, and Reedy (1994) used a randomized pretest posttest control group design to compare the effects of stress-inoculation training (SIT; Meichenbaum, 1985) consisting of progressive muscle relaxation training, cognitive restructuring, and assertiveness training in a sample of 48 ninth grade students (Male=26, Females=22). A repeated measures ANOVA determined that there were significant main effects for treatment, F(1,44)=77.21, p<.001, and for gender, F(1,44)=7.27, p<.01, with female participants scoring significantly higher than male participants. Results of a 3-way repeated measures MANCOVA indicated a significant main effect for treatment, F(3,39)=5.93, p<.01. Follow-up univariate F tests revealed significant differences between the treatment and control subjects on the State-Trait Anxiety Inventory Anxiety Scale (Spielberger, 1968), F(1,41)=14.04, p<.001, and the Symptoms of Stress Inventory (Leckie & Thompson, 1979), F(1,41)=6.11, p<.01, but not for Grade-point averages, F(1,41)=1.75,
p<.190. These findings led the authors to conclude that SIT may be an effective preventive anxiety-management and psychosocial adjustment strategy for adolescents. Although the sample size for this study was rather small, the precision of the design methodology and the statistical analyses gives great credence to the results.

Cognitive-behavioral therapy and relaxation training were compared for the treatment of depression in adolescents (Reynolds & Coats, 1985) using a sample of 20 high school students with a mean age of 15.65 years (Males=11, Females=19). Posttreatment assessment determined that significant results were found for both the interventions on a modified version of the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), F(2,20)=11.78,p<.001; the Reynolds Adolescent Depression Scale (RADS; Reynolds, 1986b), F(2,20)=5.85,p<.05; and the Bellevue Index of Depression (BID; Petti, 1978), F(2,20)=47.73,p<.001 as compared with a wait-list control group. A follow-up ANCOVA indicated that a reduction in depressive symptomatology was still evident five weeks later on all measures except the RADS. The ANCOVA of posttreatment assessment for anxiety on the State-Trait Anxiety Inventory (Spielberger, 1968) resulted in significant posttreatment differences for only the relaxation group and effects only approaching significance for the relaxation group on the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Small sample size, treatment interventions conducted by one of the authors, and arbitrary modification of the instruments called into question the reliability of the data obtained.
Assertiveness Training

Studies investigating the effects of assertiveness training have employed a variety of treatment variables to promote socially appropriate expressions of personal rights and feelings in both clinical and nonclinical populations of children and adults. However, to date, the psychological literature on preventive assertiveness training programs with children and adolescents has been minimal (Forman, 1993; Fodor, 1992; Rakos, 1991). Rather the majority of research has focused on problematic behaviors such as decreased aggressiveness (Huey & Rank, 1984); facial tics (Mansdorf, 1986); children's attitudes and beliefs about their parents' divorce (Roseby & Deutsch, 1985); adolescent diabetes (Johnson, Gross, & Wildman, 1982); improved adjustment of incarcerated delinquents (Ollendick & Hersen, 1979); remediation of school refusal and social withdrawal (Yamakazi, 1985); the prevention of adolescent drug and alcohol consumption (Dupont & Jason, 1984; Horan & Williams, 1982); and tobacco use (Del Greco, Breitbach, Rumer, McCarthy, and Suissa, 1986). In general, most social skills assessments and treatments that include an assertiveness component have been developed first on adults and then adapted or reformatted for application with children (Fodor, 1992). Future research must delineate developmental factors, age and sex norms, personality characteristics, as well as socioeconomic, racial, cultural, and geographical differences to provide a comprehensive framework from which to draw valid and far-reaching conclusions (Fodor, 1992; Takakjian, 1993).

Pentz (1980) investigated the effects of assertion training and trainers in a sample of 90 adolescents (Males - 43, Females - 47; Mean age - 14 years) screened for unassertive and
aggressive behaviors using the Syracuse Scales of Social Relations (Gardner & Thompson, 1958), a self-report assertion inventory designed by the author, and a behavioral measure. Forty-nine unassertive and 41 aggressive subjects were matched by sex and unassertive or aggressive behavior ratings and then randomly assigned to either the Structured Learning Training (SLT) condition, the verbal instruction-only condition, or the no-treatment condition. A multivariate analysis indicated a significant overall effect for type of participant (unassertive vs. aggressive), $F = 4.73, p < .01$, and type of training (SLT with teachers, parents, or students as trainers vs. verbal instructions and no-treatment conditions), $F = 6.24, p < .001$. This study required a larger population in order to utilize a multivariate analysis to reliably assess the interaction of 10 independent variables.

The contribution of individual differences to assertion training was examined by Pentz (1981) in a sample of 61 ninth grade students (Males = 37, Females = 24; Mean age = 14) based on ratings on the Syracuse Scales of Social Relations (Gardner & Thompson, 1958) used to evaluate levels of assertive behavior. Following a pretest battery measuring state anxiety (Spielberger, 1968), self-efficacy (Bandura & Adams, 1977), and assertive behavior in role-play situations (McFall & Marston, 1970; Pentz, 1980), subjects were randomly assigned to one of six training conditions varying modeling mode and training stimuli. Stepwise multiple regression analyses determined that individual differences on anxiety and verbal reasoning were the two single greatest contributors to the variance on all self-efficacy and behavior measures ($F(2, 58 \text{ to } 5, 55) = 3.69 \text{ to } 12.87, p < .05 \text{ to } .0001$) with the exception of the training stimuli effect on strength of self-efficacy ($F(5, 55) = 6.40, p < .001$). This study provided valuable information on the type of individual and environmental variables that should be explored prior to designing a social skills training program.
Pentz and Kazdin (1982) investigated variations of modeling and stimuli in a sample of 61 adolescents (Mean age = 14 years) selected for their unassertive or aggressive behaviors with teachers (36 unassertive, 25 aggressive; 37 male, 24 female). After an initial pretest assessment of self-efficacy and unassertive/aggressive behavior, subjects were randomly assigned to one of the following six training conditions: modeling (overt, covert, or no-modeling) and type of training (single type involving 12 modeling scenes with teachers or multiple type involving four modeling scenes with teachers, parents, and peers). Three-way analyses of covariance (modeling x training stimuli x initial behavior with pretest performance as the covariate) revealed a significant modeling effect for level of assertive behavior in teacher situations (F(2,48) = 9.18, P<.00001), peer situations (F(2,48) = 3.32, P<0.05), and total situations with teachers, parents, and peers (F(2,48) = 3.76, P<0.05). These results led to the conclusion that participant modeling may be more efficacious than overt or covert modeling alone in augmenting prosocial behavior in adolescents. The lack of a standardized pretest measure of assertion compromised replication of this study and limited the generalizability of the results.

An Indian study examined the effects of a behavioral program of relaxation training, assertiveness training, and study skills training on personality change and improvement in academic performance in a sample of 143 students randomly assigned to the experimental group (Male = 54, Female = 20) or the control group (Male = 54, Female = 15). The Cattell Jr.-Sr. High School Personality Questionnaire, Standard Progressive Matrices to test intelligence, Paramesh's adaptation of Wallach and Kogan Test of Creativity, and Wechsler's Memory Scale were standardized for the Indian population. Significant mean differences for boys in the experimental group were found on the Submissiveness vs. Dominance factor (t = 2.33), the untroubled vs. guilt proneness factor (t = 2.63), and Low
Ergic Tension vs. High Ergic Tension factor (t = 2.4, P<.05). Significant differences were also indicated for girls in the experimental group on the Submissiveness vs. Dominance factor (t = 2.24). These findings suggested that despite societal prescriptions to behave submissively, when given proper training and the freedom to act independently, girls can develop assertive characteristics. The disproportionate number of males to females and the adaptation of pretest assessment measures to Indian conditions preclude application of these results to other populations.

Wehr and Kaufman (1987) examined the effects of assertiveness training on assertiveness as measured by scores on the Adolescent Self-Expression Scale (ASES; Belluci & McCarthy, 1976), state anxiety as measured by the State-Trait Anxiety Inventory (STAIA-Trait; Spielberger, 1968), and mathematics performance as measured by the California Achievement Test in a sample of 96 highly anxious ninth graders (Females = 53, Males = 43). Using a Solomon four-group design, subjects were randomly assigned to one of two experimental groups receiving training in assertiveness or one of two control groups receiving training in career development. A factorial MANOVA, using Wilk's lambda criterion, indicated a significant result for treatment (F = 12.59, df = 3/66, p<.001). Univariate ANOVA's revealed significant treatment effects on posttest scores for assertiveness (F = 37.94, df = 1/68, p<.001), and state anxiety (F = 6.82, df = 1/68, p<.01). Posttest scores for mathematics performance were not significant. Since this study did not include a no-treatment control group, it was impossible to reliably evaluate the effects of treatment.

The efficacy of assertiveness training was evaluated by Thompson, Bundy, and Broncheau (1995) is a sample of 56 students from two sixth-grade classes (28 treatment, 28 control; Males = 23; Females = 29) over a 12-week period. Cognitive acquisition, measured
by a questionnaire designed by Wise, et al. (1991), and retention of symbolic information related to assertiveness and verbal content of assertive behavior in role-play situations were compared in the experimental and control group. A multivariate analysis 2x3 (Treatment x Repeated Measures) demonstrated a significant effect for treatment, \( F(1,50) = 48.28, \ p < .000 \); a significant effect for measures, \( F(2,100) = 82.09, \ p < .000 \); and a significant Treatment x Measures interaction, \( F(2,100) = 54.35, \ p < .000 \). Results did not reveal significant treatment effects on verbal performance suggesting that while trained adolescents were able to acquire and retain the symbolic representation of assertiveness information, they were unable to successfully integrate these skills on a behavioral level. There were no significant effects reported for gender or gender by treatment interaction. Small sample size, absence of randomization procedures, no information on the reliability or validity of the cognitive acquisition instrument designed by Wise, et al. (1991) contributed to weak methodology and poor design.

A similar study was conducted by Thompson, Bundy, and Wolfe (1996) using identical cognitive acquisition and performance measures as the previous study but with an expanded curriculum which included more opportunities to practice assertive responses across a wide variety of situations appropriate to young adolescents. Sixty-eight fifth-grade students in three comparable classes in two elementary schools were divided as follows: one class (Males = 13, Females = 9) received assertiveness training which included cognitive and performance elements; another class (Males = 16, Females = 7) served as a control for both the cognitive and performance tests; and a third class (Males = 13, Females = 10) served as a second control group for cognitive testing only. A multivariate 3x2 (Treatment x Repeated Measures) analysis of variance revealed a significant effect for treatment, \( F(2.65) = 12.16, \ p < .000 \); a significant effect for measures, \( F(1.65) = 63.35, \ p < .000 \); and a
significant Treatment x Measures interaction, $F(2,65) = 38.40$, $p<.000$. As in the prior study, the curriculum on assertion proved very effective in influencing the students' cognitive or symbolic representations of information about assertion but not effective when measured by performance role-play tests, thereby, suggesting the need for situation-specific training and practice. Particularly noteworthy is the authors' recommendation that assertion programs may be more effective if extra attention is given to specific techniques which facilitate self-regulation processes. Limitations of this study are identical to those noted in the previous review.

Piccinin, McCarrey, and Chislett (1985) compared didactic vs. facilitative cognitive behavioral assertion training programs in a sample of 111 college undergraduates (75% female, 25% male; mean age = 23.7). Subjects were screened based on scores on the Conflict Resolution Inventory (McFall & Lillesand, 1971) which evaluates refusal behavior, scores on the Modified College Student Self-Expression Scale (Galassi, De Lo, Galassi, & Bastien, 1974) which assesses request behavior, and behavioral role-play tests. Those students who met the selection criteria were randomly assigned to either the didactic or facilitative conditions within the refusal training program or the request training program. While no significant differences were found between the two training conditions, univariate repeated measures ANOVAs indicated that combined didactic and facilitative programs produced significant changes in assertiveness on the global nonverbal rating ($F(3,126) = 18.52$, $p<.0001$; on the global request rating ($F(3,84) = 16.65$, $p<.0001$; and on the global refusal rating ($F(3,48) = 8.58$, $p<.001$). Generalization of results were evident for transfer of request training to refusal behavior, but not vice versa. The disproportionate number of females to males limits the generalizability of this study to different populations of undergraduate males.
McNeilly and Yorke (1990) evaluated the effects of social skills training in a sample of 48 Junior High School adolescents (Males = 24, Females = 24) who were screened for unassertive school behavior based on a score of zero or less on a Rathus Assertiveness Schedule Modified for Early Adolescents (RASM; Del Greco, Breitbach, & McCarthy, 1981), indication of one real significant school assertion problem, and ratings of unassertive behavior by at least two of four teachers. Subjects were randomly assigned to one of four groups: M - modeling only, I - instructions only, M+I - modeling and instructions, or C - control. A one-way ANOVA did not yield significant differences between groups on posttest 1 after six (45-minute) non-practice sessions. However, a significant between-group difference was found for post-2 test assertiveness scores (F(3,39) = 8.80, p<.01) and post-1 test assertiveness scores (F(2,32) = 4.85, p<.05). All treatment groups were rated as significantly more assertive than the control group, post-2 testing (F(3,39) = 14.71, p<.01).

ANOVA results of within-group changes were found to be significant for all treatment groups (M–I group (F(2,32) = 31.94, p<.001); M group (F(2,32) = 14.55, p<.001); and I group (F(2,32) = 6.24, p<.01). The authors concluded that setting specificity and personal selection of problem behaviors can be expected to heighten the effectiveness of assertion training. This study was well designed, methodologically sound, and offered insightful recommendations for future studies.

The effects of assertive training on the performance self-esteem was examined in a study by Stake, et al. (1983) in a sample of 148 adolescent girls from 10 business and homemaking classes in six high schools. The Performance Self-Esteem Scale (PSES; Stake, 1979a), designed to measure subjects' self-evaluations of their ability to perform in an achievement setting, was administered pretest, posttest, and at a three-month follow-up. A repeated measures analysis of variance found significant main effect for treatment for the
PSE group, F(1,146) = 236.87, p<0.0001, and for time of testing, F(1,146) = 6.89, p<0.01. Low PSE subjects showed greater gains than high PSE subjects. Analysis of changes in PSES scores between pretesting and follow-up found significant main effects for the PSE group, F(1,101) = 167.19, p<0.0001, and for time of testing, F(2,202) = 7.28, p<0.001. Major shortcomings of this study were lack of random assignment, a control group consisting of only 10 subjects, and one of the authors serving as co-leader of the training groups.

Kirkland, Thelen, and Miller (1983) assessed the effect of group assertion training in a sample of 36 ninth-grade students (18 girls, 18 boys) who were randomly assigned in equal numbers to treatment, placebo, and control groups. Students who met the criterion of a score in the lower one-third on the Adolescent Self-Expression Scale (Bellucci & McCarthy, 1976) and were identified as assertive by their school counselor were selected to participate. The Adolescent Assertion Test (AAT) which is a modification of role-play assessment measures used in adult research was administered to determine a pre-training level of assertion. Using a 3x3x2 univariate analysis of variance for the trained AAT role-play scenes revealed a significant main effect for treatment F(2,25) = 17.22, p<.0001; a main effect for time of assessment F(2,65) = 358.65, p<.0001; and an interaction effect of treatment by time of assessment F(4,65) = 37.90, p<.0001. In addition, significant main effects were evidenced for the untrained AAT scenes for treatment F(2,25) = 83.63, p<.001; for time of assessment F(1,35) = 161.55, p<.001; and for interaction of treatment by time of assessment F(2,35) = 39.16, p<.001. Although assertion training decreased response latency to the trained scenes, there was no evidence that the effects of training generalized to untrained scenes. Small sample size and the use of an unvalidated
instrument to assess level of assertion create some question about the reliability of the results.

The effects of a short-term assertion training program on measures of self-descriptions as measured by the Piers-Harris Children's Self-Concept Scale (Piers & Harris, 1969) and locus of control as measured by the Intellectual Achievement Responsibility Questionnaire (IAR; Crandall, Katkovsky, & Crandall, 1965) was investigated by Waksman (1984a). Forty-six adolescent students enrolled in two sections of a health-science class (Males = 27, Females = 9; Mean age = 13.605) randomly assigned to the treatment group and to the nontreatment comparison group were administered the Piers-Harris, the IAR, and an unpublished Assertion Inventory prior to treatment. T-tests for pre- and post-treatment assessment scores indicated that the treatment group had improved their scores significantly on both the Piers-Harris (t=3.51, p<.01) and the IAR (t=2.075, p<.05). A seven-week follow-up indicated that the treatment group had maintained their improved scores on the Piers-Harris (t=2.12, p<.05) and the IAR (t=2.11, p<.05). By not controlling for placebo effects, it is difficult to determine if the improved scores are the result of treatment or due to the special attention paid to these students.

In a follow-up study, Waksman (1984b) evaluated a standardized assertion training program in a sample of 58 adolescents enrolled in two sections of a health-science class (Males = 32, Females = 36; Mean age = 12.97) who were randomly assigned to the treatment group or to the placebo-counseling group. Pre-treatment assessment measures included the Piers-Harris Children's Self-Concept Scale (P-H; Piers & Harris, 1969), the Intellectual Achievement Responsibility Questionnaire (IAR; Crandall et al., 1965) and the State-Trait Anxiety Inventory for Children (STAIC; Spielberger, 1968). Planned orthogonal comparisons revealed a significant difference between the group treatment
differences on the P-H measure (F = 4.18, p<.05) but not on any of the other measures. No significant sex differences were found on any of the measures. Results at a four-week follow-up found that the assertion training group had maintained their improved scores (F = 4.68, p<.05). Similar limitations as noted in the prior study (Waksman, 1984) were evident in this study.

A two-stage investigation of assertiveness training by Rotheram and Armstrong (1980) determined baseline rates of assertiveness and evaluated a 10-week cognitive behavioral assertion training program. In the first-stage, a sample of 22 ninth-grade (Males = 14, Females = 8) and 22 twelfth-grade (Males = 9, Females = 19) adolescents were randomly selected from 10 high school classrooms and administered the Problem-Focus Checklist (Paulson, 1973) and the Adolescent Assertiveness Discrimination Test (Schoemacher & Pyrinski, 1974) to determine level of assertion. Females decreased in assertiveness with grade level (F(2,40) = 6.3, p<.05) while males showed an increase in assertive responses (F(2,40) = 5.9, p<.05). In the second-stage, subjects were 58 ninth-grade and 47 twelfth-grade students (Males = 41, Female = 44) randomly selected and randomly assigned to either the treatment condition or the control condition. An analysis of variance revealed a significant difference on the pre-treatment scores on the Adolescent Assertiveness Discrimination Inventory (Schoemacher & Pyrinski, 1974) than on the post-treatment scores (F = 5.2, df = 1,71). In addition, a significant main effect for cohesion level was found, (F = 4.9; df = 1,71), suggesting that subjects in the high cohesive groups rose significantly compared to those in other conditions. Small sample size in stage-one and lack of a placebo group in stage-two compromise the reliability of the results.

As previously noted in the section on relaxation training, Kiselica, et al., (1994) determined that a program of preventive stress inoculation consisting of a blend of
progressive muscle relaxation, cognitive restructuring, and assertiveness training yielded significant main effects for treatment, F(1,44) = 77.21, p<.001, and for gender, F(1,44) = 7.27, p<.01, with female participants scoring significantly higher than males.

Empathy Training

In light of psychologists’ recognition of empathy as a buffer against stress (Eisenberg & Strayer, 1987), a foundation for creating interpersonal relationships (Egan, 1975) and prosocial behaviors (Eisenberg & Miller, 1987), a mediator for aggressive behavior (Miller & Eisenberg, 1986), an integral component of conflict resolution (Kramer, 1988), an important prerequisite for successful parenting (Guzzetta, 1976; Therrian, 1979), training in empathy for children and adolescents has come to be regarded as an important preventive mechanism rather than simply a psychotherapeutic intervention. Despite this burgeoning awareness, few studies exist which actually attempt to augment empathic skills in an adolescent sample. Rather, the emphasis appears to focus on designing programs that may establish goals for heightened empathic ability without outlining a systematic methodology for achieving this end (Nicoll, 1994).

Historically, the focus of empathy training has involved correlational studies between a counselor’s ability to learn empathic skills and successful therapeutic outcomes (Rogers, 1951; Truax & Carkhuff, 1967). Other comparative studies of skill training have employed samples of adults and college students utilizing techniques that include: 1. observation of a model as an effective method of skill acquisition (Bandura, 1969; Bandura & Walters, 1968; Payne & Gralinski, 1968; 2. rehearsal as a method of stabilizing and strengthening acquired skills (Bandura, 1969) 3. instructions to promote awareness and provide necessary advancement of cognitive restructuring (Bandura, 1969) 4. microtraining coupled with programmed instruction, compared with didactic methods to a sample of 55 lay persons in
evangelical churches (Mean age = 35 years) (Crabb, Moracco, & Bender, 1983) 5.

instructions, modeling, and rehearsal in training 48 college students in empathic
communication (Stone & Vance, 1976); 6. didactic, experiential, and modeling factors in
training 48 counselor supervisors (Payne, Weiss, & Kapp, 1972); 7. a combination of
detailed instructions and modeling to promote written and verbal expressions of empathy
in 50 college students (Uhlemann, Lea, & Stone, 1976); 8. a comparison of teacher-
intensive and self-directed empathy training to 60 college undergraduates (Mean age = 23
years) with a 13 to 17-month follow-up (Kremer & Dietzen, 1991); and 9. utilization of
modeling, praise, and criticism in teaching empathic responding to a sample of 64 female
undergraduate students (Gulanick & Schmeck, 1977). In some studies with children,
training procedures using role-reversal (Iannotti, 1975); role taking (Peraino, 1977);
reinforcement conditioning (Aronfreed, 1968; Midlarsky & Bryan, 1967); affect-labeling
procedures (Feshbach, 1978); and written essays to capture emotional reactions (Li, 1990)
have attempted to enhance empathic tendencies. All of the investigations noted above
yielded significant positive results for each of the methods employed, either independently
or in combination and within small and large group formats, leading to the conclusion that
empathy is a skill that can be taught within a structured and controlled context.

Feshbach's (1975, 1978) extensive studies on empathy in children paved the way for a
three-component model of empathy training which has been effective in decreasing
aggressive behaviors in grade school children (Feshbach & Feshbach, 1969). The first two
cognitive components of this model include affect discrimination which facilitates
rudimentary discrimination between affective states in others and role taking which
influences empathy but presupposes a more advanced level of cognitive complexity. The
third component is affective and requires the observer to personally match or share in the
positive or negative emotion being observed. Not only do these techniques foster empathic responses, they have also been shown to enhance one's feeling of competence in social comprehension which, in turn, facilitates increased self-esteem (Feshbach, 1978).

Feshbach (1975) asserted that effectiveness of an empathy training program is determined by articulation of affective elements along with inclusion of more cognitively defined skills. The effectiveness of the psychodramatic Double method (role-playing procedure in which the subject is requested to assume the role of another person) (Moreno, 1946), the Reflection method (the subject mirrors back what are perceived to be the feelings and thoughts of another person), and the method of Lecture (didactic instruction) were evaluated in a sample of 64 Israeli public high school sophomores (Males=32, Females=32) (Kipper & Ben-Ely, 1979). In order to determine that subjects possess some, but not too high a level of empathic ability, a criterion of scores falling within +/- one standard deviation of the sample's average score on the Accurate Empathic Scale (Truax, 1961) was established, resulting in the final sample of 64 from the initial population of 120 high school sophomores. A two-way analysis of variance (sex x training groups) was conducted after completion of training, revealing significant differences among training groups (F(1,3)=12.40, p<.01) with the Double method as the most effective. A significant main effect for sex (F(1,3)=4.01, p<.05) was also displayed with females scoring higher than males both before and after training. No significant interaction effects for sex and training were found. Limitations of this study include lack of random selection and random assignment and use of a modified version of the Accurate Empathic Scale (Truax, 1961) based on only one prior validity study with 90 Israeli high school sophomores.

Hatcher, et al., (1994) studied the teachability of empathy to high school and college students using Rogerian-based peer facilitation training (High school juniors and seniors -
College students - 16; No-treatment college controls - 16). Pair-wise t-tests comparing college trained, college untrained, and high school trained, revealed only the trained college group showed a significant change on the Interpersonal Reactivity Index measure of empathy, t(15) = 2.23, p < .05, with the most significant change on the Perspective-taking Scale, t(15) = 2.76, p < .02 while the high school group displayed a significant trend on the Fantasy Scale, t(51) = 1.82, p < .08. The trained college group improved significantly more than the untrained college group, F(1,29) = 4.09, p < .05; and more than the high school group, F(1,65) = 5.01, p < .03. Moreover, the trained college group improved significantly more on the more developmentally advanced Empathic Concern subscale than did the untrained college group, F(1,29) = 4.99, p < .04; significantly more than the high school group, F(1,65) = 5.59, p < .03; and significantly more on the Perspective-taking scale than the high school group, F(1,64) = 5.46, p < .03. Despite pre-test assessments indicating higher empathy scores for college females, post-test results suggest that empathy skills appear to be equally teachable to males and females. The researchers concluded that true teachability in adolescence begins with identification with fictional characters but does not progress into a mature capacity for empathy until junior year in college. Although this study demonstrated a greater developmental readiness in college versus high school students, without the inclusion of a high school no-treatment control group it is impossible to determine whether training significantly improved empathic communication relative to a high school population. Moreover, because these results were based solely on Rogerian training, it is possible that a program of empathy training specifically designed for an adolescent's level of development readiness might yield more positive results.

Pecukonis (1990) studied the effects of four, one and one-half hour sessions of cognitive/affective empathy training on the level of empathy in 24 aggressive adolescent
females (Mean age = 15.5). Subjects were randomly assigned to either the experimental or control group based on high or low scores on a measure of ego development. Employing a pretest/posttest design, changes in empathy were measured with the Hogan Empathy Test (Hogan, 1969) measuring cognitive empathy and the Mehrabian & Epstein (1972) measure of emotional empathy. A two-factor analysis of covariance displayed a statistically significant posttest increase in affective empathy for the experimental group, $F(1,15) = 5.765, p<.080$ with neither a significant main effect for ego development nor an interaction between empathy and ego development. Analysis of covariance revealed that both cognitive empathy pretest scores were highly significant predictors of posttest scores ($F(1,15)=30.461, p<.001$) as well as affective empathy pretest scores as significant predictors of posttest scores, ($F(1,15)=6.679, p<.021$). Small sample size and no information on the reliability and validity of the semi-projective test of ego development (Loevinger and Wessler, 1970) restricts the generalizability of results to other samples of adolescent females.

Guzzetta (1976) compared the transfer and acquisition of empathy using structured learning training (SLT) in a sample of 37 mothers of 8th, 7th, and 8th grade students divided among the following training groups: 1). parents received structured learning training in empathy while teenagers did not 2). parents received structured learning training in empathy while teenagers received structured learning training in empathy and participated in discussions on communication in a separate group 3). parents and teenagers received structured learning training in empathy together 4). control group. Analysis of variance comparing groups one, two, and three on the Parent Training Questionnaire revealed a significant difference between the pre- and posttest scores, $F(1,23) = 355.22$, $p<.001$, on Form A (measure of acquisition) and on Form B (measure of generalization),
F(1,23) = 252.41, p<.001. No significant differences were found between the means of Group three in which parents and teenagers received training together and groups two and one. Small sample size and an unvalidated questionnaire designed by the author, specifically for this study, minimize generalizability.

Dependent Variables

Separation-Individuation

In depth understanding of human psychological development inevitably involves examination of the vicissitudes of the adolescent experience and its impact on healthy and pathological functioning. Traditional psychoanalytic thinking (Freud, 1915; A. Freud, 1958; Fenichel, 1954; Jacobson, 1961) described adolescent development as a period of disruption in personality organization that leads to psychological disequilibrium, turmoil, and mood swings. Often, this reorganization of psychic structure is manifested in a renunciation of childhood relationships as a necessary prerequisite to effect the transition to adulthood (A. Freud, 1958). The turmoil of this stage appears to emanate from regressive shifts to an earlier narcissistic position which creates a state of vacillation between closeness and flight that threatens the cohesiveness of the entire personality (Douvan & Adelson, 1966).

However, once empirical research failed to find consistent evidence to support psychoanalytic formulations, some theorists came to reject this view and called into question the degree to which turmoil and rebellion actually comprise an integral part of adolescence (Douvan & Adelson, 1966; Offer, 1969; Offer, Ostrow, & Howard, 1981; Schoeppe & Havighurst, 1952; Masterson, 1985; Josselson, Greenberger, & McConochie, 1977b; Hill & Holmbeck, 1986). In a six-year longitudinal study of adolescent development, Offer and Offer (1975) concluded that turmoil is not the prevalent mode of
resolution in a normal adolescent population. Further support for this perspective was achieved by Offer et al., (1981) through extensive self-reports by thousands of adolescents from varying backgrounds. The authors maintained that individual capacities determine how each adolescent will traverse the challenges of this life stage and the degree of maladjustment that may ensue.

Blos (1967) was the first to discuss adolescent development within the framework of the separation-individuation process conceptualized by Mahler (Mahler et al., 1975). During the second separation-individuation process that occurs during adolescence, Blos (1967) theorized that successful negotiation of this stage involves emotional detachment and disengagement from internalized objects in order to fulfill emancipatory goals.

Although many theorists still regard Mahler's theory (Mahler et al., 1975) of childhood separation-individuation as the template for the adolescent experience, a more contemporary focus considers a continuity perspective of adolescent development that incorporates both separation and connection (Josselson, 1988). Consistent with the formulations outlined by attachment theorists (Bowlby, 1969; Ainsworth et al., 1978), the parent who furnishes a secure base from which to explore the environment promotes a sense of autonomy, interpersonal competence, and positive self-esteem. Josselson (1988) interpreted Mahler's (Mahler, et al., 1975) idea of refueling during rapprochement as the separating toddler returning to the mother to obtain more "fuel" for autonomy as well as to bring her along. In other words, "The toddler's rapprochement with mother may not only be for what he or she needs from mother, but to engage and share with mother to ensure their continuing connection" (Josselson, 1988, p. 94).

Grovetant and Cooper (1986) reconceptualization of separation-individuation from a relational perspective maintained that the balance between individual and parental
connectedness is a fundamental organizing principle that is most facilitative to adaptive functioning. Within the context of family systems theory, the parent/child bond is seen as undergoing a transformation to allow for a mixture of separateness and connection that promotes individuation while still maintaining an embeddedness of the self in relationships with others (Karpel, 1976; Youniss & Smollar, 1985; Grovetant & Cooper, 1985; Allison & Sabatelli, 1988; Bartle, Anderson, & Sabatelli, 1989; Gavazzi & Sabatelli, 1990).

Allen, et al. (1990) reinforced this position by citing research findings which suggest that the optimal developmental path in adolescence entails seeking autonomy within the context of a positive parental relationship. Attachment relationships that are not secure create problems for adolescents in trying to integrate their need for autonomy while preserving their parental ties.

Gilligan’s (1982) seminal work on women’s development reconceptualized an adolescent girl’s separation process as one which maintains the primacy of responsive relationships and values the fusion of identity and intimacy as central to her sense of self and as a powerful determinant of her psychological reality. Separation and connection are not dichotomized but are regarded as two compatible dimensions that function in the service of each other (Chodorow, 1978; Rodgers, 1993; Miller, 1984; Jordan, Kaplan, Miller, Stiver, & Surrey, 1991). To silence one’s voice and abandon the self for the sake of preserving relationships puts adolescent girls at greater risk for loss of vitality, lowered self-esteem, susceptibility to depression, and compromised resiliency (Brown & Gilligan, 1992).

Steinberg and Silverberg (1986) assessed three aspects of autonomy: emotional autonomy in relationships with parents, resistance to peer pressure, and the subjective sense of self-reliance in a sample of 865, 10-16 year olds from a range of socioeconomic backgrounds, evenly divided by sex. Using a newly developed scale designed by the
authors, the three aspects of autonomy were examined in terms of age, sex, and social class differences. Results revealed that girls scored higher than boys on the overall measure of emotional autonomy, $F(1,713) = 6.03$, $p<.01$, and on all four emotional autonomy subscales. Although the sex differences were significant, only one of the four subscales, deidealization, $F(1,713) = 21.14$, $p<.001$ was significant. With respect to resistance to peer pressure, girls were significantly more likely than boys to resist the influence of their friends in both antisocial and neutral situations, $F(1,677) = 36.57$, $p<.001$ and $F(1,677) = 3.65$, $p<.01$, respectively. Finally, in terms of sex differences in self-reliance, girls were favored over boys, $F(1,677) = 9.22$, $p<.005$. Based on object relations theory advanced by Chodorow (1978), the authors concluded that "a. self-reliance in girls but not boys, is facilitated by close family relationships and b. feelings of self-reliance, so engendered, help 'protect' adolescent girls against peer pressure" (p.349). Although the authors used a newly developed instrument that had not been assessed for validity and reliability, this study was well designed and offered some thought-provoking questions for future investigations.

Ruebush (1994) examined the role of the mother-daughter relationship in the process of psychological separation in adolescence in a sample of 50 mother-daughter dyads (Mean age = 16.5). The author hypothesized that psychological separation (as measured by the Psychological Separation Inventory; PSI; Hoffman, 1984 and a combination of two PSI subscales) could be predicted by maternal empathy and by the conceptual complexity of the mother's and daughter's sense of self (as measured by the Offer Self-Image Questionnaire for Adolescents; OSIQ; Offer, 1977) and object representations (as measured by a task designed by Blatt, Chevron, Quinlan, and Wein, 1979). Although the total PSI score was not a significant predictor, the combined scores of the Conflicting Independence (CI) and Emotional Independence (EI) subscales were statistically
significant ($R = .69$, $p < .00001$) as predictors of adolescent separation. Congruence between
the mother's empathic understanding of her daughter's self-perception ($F(3,36) = 4.52$, $p < .01$) and the daughter's self-perception ($F(3,46) = 4.98$, $p < .005$) was also a significant
predictor of psychological separation while complexity of object representations was not.
Although results supported the author's original hypothesis, no insights were offered to
explain the lack of significance for the total PSI scores as well as the PSI subscale scores.

Papini, Farmer, Clark, & Snell (1988) used a sample of 169 senior high school students
ranging in age from 14 to 18 years to examine adolescent sexual self-disclosure to their
parents and friends. Means on the Sexual Self-Disclosure Scale (Snell, Belk, Papini, &
Clark, 1988) revealed that adolescents disclosed significantly more about sexual concerns
and related topics to friends than to parents. Separate regression analyses to predict
individual characteristics determined that on four scales of the Separation-Individuation
Test of Adolescence (SITA; Levine, et al., 1986) Enmeshment Seeking and Nurturance
Seeking were not significantly related to sexual self-disclosure to parents. Dependency
Denial, which involves rejection of the affective qualities of relationships, was one of several
factors significantly related to lowered sexual disclosure to parents ($r = .23$, $p < .01$). Self-
Centeredness, or the ability to maintain a sense of self in relationships, enhanced
adolescent sexual self-disclosure to parents. Nurturance Seeking was the strongest
predictor of sexual self-disclosure to friends, leading to the conclusion that an adolescent's
emotional individuation from the family allows for the ability to form emotional
interdependent relations with others. The use of a sample of white adolescents, coming
from relatively well-educated, white-collar families restricts the generalizability of results to a
broader population.
Papini, Micka, & Barnett (1989) assessed whether perceptions of intrapsychic functioning (degree of self-conscious reasoning and quality of the separation-individuation process) and extrapsychic functioning (family coping, family cohesion, and openness of parent-adolescent communication patterns) could be used to discriminate between "pure identity statuses". A sample of 178 participants ranging from 15 to 20 years was used to evaluate a total of ten variables reflecting individual developmental characteristics including four scales of the SITA (Levine et al., 1986) - Healthy Separation, Nurturance Seeking, Dependency Denial, and Engulfment Anxiety - as well as perception of family functioning by a stepwise discriminant analysis. A post hoc Scheffe test found significant differences for foreclosed adolescents on lower levels of Healthy Separation than identity achieved adolescents (48.01) and higher levels of Dependency Denial for foreclosed adolescents than identity achieved adolescents. Additionally, foreclosed adolescents perceived themselves as seeking more nurturance from interpersonal relationships than other adolescents while identity diffused adolescents revealed greater Engulfment Anxiety than identity achieved adolescents. Overall, identity achieved adolescents exhibited the greatest levels of Healthy Separation (F(3,170)=48.01, p<.05) than moratorium (F(3,170)=45.28, p<.05), foreclosed (F(3,170)=42.00, p<.05), and diffused (F(3,170)=43.08, p<.05) adolescents. Selection of a refined sample of individuals who exhibited "pure identity statuses" without the presence of a control group raises some questions about both the methodology, the design and, ultimately, the generalizability of the results.

McCurdy and Scherman (1996) investigated the effects of family structure on the adolescent separation-individuation process in a sample of 90 undergraduates randomly selected from three family structure groups: 91) intact; 2) divorced, mother-custody, no
remarriage; (3) divorced, mother-custody, remarried. The components of the separation-individuation process were explored using the Parental Attachment Questionnaire (PAQ) (Kenny, 1987) to assess attachment, the Psychological Separation Inventory (PSI) (Hoffman, 1984) to evaluate conflictual independence, the Private Self-Consciousness Scale (SCS) (Fenigstein, Scheier, & Buss, 1975) to measure an individual's tendency to be self-evaluative, the Ego Identity Scale (EIS) (Tan, Kendis, Fine, & Porac, 1977) to determine strength of ego identity, and the Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965) to measure global positive or negative attitudes toward the self.

Repeated measures univariate ANOVA indicated significant differences for family structure in ratings on the Affective Quality of Relationships scale of the PAQ, F(2,84)~5.25, p<.007, and ratings on the Affective Quality of Attachment scale of the PAQ, F(1,84)~33.79, p<.0001. Pearson correlation coefficients determined that scores on the father subscales of two of the three PAQ scales (Affective Quality of Relationships and Parents as Sources of Support) were significantly positively correlated with scores on RSES, (r=.28, p<.01 and r=.33, p<.01), respectively, but not significantly correlated with scores on the mother subscales of the three PAQ scales. Greater conflictual independence from their fathers was significantly greater for the intact group than the divorced and remarried groups, F(2,84)~4.79, p<.05. There was no evidence of group differences in ego identity or self-awareness. The authors selection of a sample that included only adolescents experiencing mother-custody arrangements limits generalizability of results to other adolescent groups.

Several instruments have been constructed to evaluate the development of adolescent autonomy within both a normal and a clinical population. Hoffman's Psychological Separation Inventory (PSI; Hoffman, 1984) extrapolated from psychoanalytic theory to
elucidate functional, emotional, and attitudinal independence issues involving psychological separation of late adolescents from their parents. Moore (1987) assessed the multidimensional nature of parent-adolescent separation as a preliminary to and within the context of late adolescent home-leaving. The Separation Anxiety Test (SAT: Hapsburg, 1980) was designed as a semi-projective instrument to evaluate responsiveness to separation stress. A 65-item, Separation-Individuation Inventory, was developed by Christenson and Wilson (1985) to assess pathology in the separation-individuation process.

Empathy

Empathy is considered to be a distinctly human capacity that promotes prosocial bonds necessary for civilized life. However, little research exists which investigates the construct of empathy in an adolescent population. Rather the bulk of the literature focuses on determining the biological origins of empathy (Douvan & Adelson, 1966; Hoffman, 1984; Clarke, 1980), delineating the developmental progression of empathy (Adelson & Douvan, 1966; Hoffman, 1984; Feshbach, 1978; Piaget, 1932), defining the multidimensional levels of the empathic experience (Mehrabian & Epstein, 1972; Hogan, 1969; Stotland, 1969; Batson & Coke, 1981, Davis, 1980), exploring the antecedents of empathy within a familial context, (Freud, 1915; Fenichel, 1954; Kohut, 1971; Chase-Lansdale, Wakschlag, & Brooks-Gunn, 1995; Eisenberg & Strayer, 1987; Barnett, 1987; Maccoby & Martin, 1983; Fabes, Eisenberg, & Miller, 1990; Zahn-Waxler, Radke-Yarrow, & King, 1979), and establishing the relationship of empathy to aggression (Miller & Eisenberg, 1986) and prosocial behaviors (Eisenberg & Miller, 1987). Attempts to measure gender differences through the use of facial/gestural indices, picture/story indices, questionnaires, self-reports, physiological indices, and teacher ratings have yielded inconsistent results which appear to be a function of the way empathy is operationalized and assessed (Eisenberg & Lennon,
1983). Moreover, it appears that age-related expressions of empathy may have a different developmental course which is contingent on societal expectations of emotionally appropriate behavior at specific ages (Feshbach, 1978; Eisenberg & Strayer, 1987).

Social perspective-taking ability, cognitive complexity, and listener-adapted communication was studied by Ritter (1979) in a sample of 33 subjects (Female = 17, Male = 16) divided into two groups with a mean age 14-11 and 17-11, respectively. Cognitive complexity tasks were computed following the procedure outlined by Crockett, Press, Delia, and Kenny (1974) in which a total score was computed for attributes presented in a verbal communication as either "descriptive" or "psychological." A persuasive communication task and an empathic communication task were utilized to assess quality of interpersonal constructs. An analysis of variance revealed that by late adolescence there was greater use of communication strategies reflecting higher levels of perspective-taking than in early adolescence (main effect for age, F = 7.10, df = 1.25, p < .01), with a mean highest strategy level score of 4.63 for seventeen-year-olds and 2.75 for fourteen-year-olds. Similarly, a main effect for age was found on the empathic communication task data (F = 20.80, df = 1.25, p < .001), with a mean strategy level score of 3.65 for seniors and 2.02 for freshmen. Older adolescents had more complex and psychologically differentiated perceptions of others than did younger adolescents (F = 18.13, df = 1.31, p < .001). Lack of standardized instruments to assess levels of empathy limited generalizability to other populations.

McDevitt, Lennon, and Kopriva (1991) investigated the degree to which mothers and fathers encouraged prosocial actions and empathic responses in a sample of 246 students divided into two age groups: younger adolescents (between 12.4 and 15.0 years, M = 13.9) and older adolescents (between 15.1 and 18.9 years, M = 16.35). Subjects completed the
Children and Families Scale (McDevitt, Lennon, & Kopriva, 1991) which assesses the degree to which parents encourage prosocial actions and empathic responses and the Issues and Choices measure (Lennon, McDevitt, & Sheehan, 1987) which assesses levels of moral reasoning. Analysis of variance indicated that both boys and girls perceived their mothers as promoting prosocial actions and empathic responses more than their fathers promoted these actions and responses, $F(1, 191) = 37.82$, $p < .001$. However, analysis of the between-subjects effects revealed a marginally significant effect for child gender, $F(1, 191) = 3.71$, $p < .06$. Follow-up $t$-tests suggested that girls perceived mothers as encouraging prosocial and empathic tendencies more than boy perceived such encouragement, $t(193) = 2.23$, $p < .05$. In addition, girls perceived that mothers shared their emotional responses with them more than boys perceived such sharing, $t(193) = 3.05$, $p < .01$, and avoided callous attitudes, $t(193) = 2.20$, $p < .05$. Finally, Spearman correlations determined that total scores for mother and father items were significantly associated with level of reasoning ($r = .27$, $p < .001$ for mothers; $r = .27$, $p < .001$ for fathers), indicating a positive relationship between children who tended to reason at relatively high levels about helping others had parents who tended to encourage prosocial action and empathic responses. Use of unvalidated assessment measures developed by the authors may have introduced the effects of experimenter bias as a confounding variable.

Eisenberg and McNally (1993) examined socialization and mothers’ and adolescents’ empathy-related characteristics in a longitudinal eight-year study using a sample of 32 mothers and their children (16 girls, 16 boys) interviewed at the following intervals: 7 to 8 years, 9 to 10 years, 11 to 12 years, 13 to 14 years, and 15 to 16 years. The Child Rearing Practices Report (CRPR; J.H. Block, 1965), administered to each mother individually at each of the five interview sessions, is a Q-sort procedure to assess child-rearing practices.
The authors refined the original eight-scale composites into three new composites: Positive Emotional Communication, Rational Independence Training, and Reluctance to Discipline. At Time Five, both mothers and children were individually administered the Perspective Taking, Empathic Concern, and Personal Distress scales of the Interpersonal Reactivity Index (Davis, 1983b) as well as the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964). Positive Emotional Communication and Rational Independence Training, r(30) = .55, p<.002 was the only significant correlation among the three maternal child-rearing composites. Children's scores on social desirability were significantly related to their perspective taking and sympathy, r(30) = .58 and .47, ps<.001 and .007, but not their personal distress. Maternal Positive Emotional Communication was positively related to children's cognitive perspective-taking (r = .37, p<.05), particularly girls' (r = .53, p<.01) as well as girls' sympathy (r = .64, p<.01), but negatively related to boys' personal distress (r = -.58, p<.05). In addition, Reluctance to Discipline was negatively related to children's' personal distress (r = -.43, p<.05) and particularly to girls' (r = -.84, p<.001). When the effect of social desirability as well as sex was partialled out (partial r(28) = -.47, p<.01), Maternal Rational Independence Training was significantly positively related to children's perspective-taking (r = .47, p<.01). Furthermore, the relationship between maternal practices and adolescent's empathy-related characteristics did not significantly strengthen or weaken with age of the mother and the child. Finally, there were no significant relations between children's and mother's perspective-taking, personal distress, and sympathy for the total sample. However, when considering each sex separately, a marginally positive correlation was found between mothers' perspective-taking and girls' sympathy, Spearman r(13) = -.51, p = .051 (Spearman r = .04 for boys). The use of an
unvalidated self-report measure and small sample size compromise the reliability of the results.

Koestner, Franz, and Weinberger (1990) explored the relationship between early parenting practices and later adult levels of empathic concern in a longitudinal sample of 75 subjects first investigated by Sears, Macoby, and Levin (1957). When subjects were five years old, the researchers evaluated maternal and paternal parental behaviors, teachers' ratings of children's behavior in kindergarten, and mother's ratings of children's behavior. A follow-up assessment at age 31 years included the Adjective Checklist (Gough & Heilbrun, 1980), the Thematic Apperception Test derived measures of social motives (McClelland & Filon, 1983), and the Rokeach Values Inventory (Rokeach, 1973). A stepwise regression analysis revealed a significant multiple R of .60, F(8,67) = 4.63, p<.001, indicating that taken together, the parenting dimensions predicted the level of empathic concern at age 31. Paternal involvement (Beta = .37) and maternal tolerance for dependent behavior (Beta = .26) significantly predicted empathic concern. Maternal inhibition of the child's aggression (Beta = .19) and maternal role satisfaction (Beta = .18) were marginally significant effects. Females scored higher on the index of empathic concern than males (Beta = .17), indicating a marginally significant effect for sex of the child. Despite the limited usage of the Adjective Checklist derived for empathic concern, the results suggested that parenting behaviors in early childhood can have a lasting impact on the course of personality development.

Fabes, Eisenberg, & Miller (1990) examined maternal correlates of children's vicarious emotional responses in a sample of 59 second graders (26 girls, 33 boys, Mean age = 96.44 months) and 58 fifth graders (25 girls, 33 boys, Mean age = 131.10 months). Three subscales of the Interpersonal Reactivity Index (Davis, 1983) - Personal Distress (PD),
Perspective-Taking (PT), and Empathic Concern (EC) - conceptually and empirically differentiated between various types of vicarious emotional responsiveness. Physiological and facial indices were also used to differentiate between sympathy and personal distress. Mothers' scores on the EC and PT were positively related to girls' reports of negative affect ($r = .68$, $p<.001$) and sympathy ($r = .38$, $p<.01$) and inversely related to girls' reports of positive affect ($r = -.69$, $p<.001$). Although fewer relations were found for boys between mothers' sympathy and vicarious emotional responsiveness, mothers' scores on PT and EC were positively related to boys' helpfulness ($r = .25$, $p<.05$ and $r = .23$, $p<.05$, respectively). These results suggested that girls whose mothers were warm and empathic facilitated emotional responsiveness and boys whose mothers were relatively sympathetic and high in perspective taking were more willing to help. The authors concluded that maternal empathy and sympathy are important factors in the socialization of children's vicarious emotional responses and prosocial behavior whereas personal distress reactions serve to alleviate one's own aversive state rather than allowing sensitivity to the other's needs. By assessing the multidimensional nature of empathy with a variety of indices, the authors have addressed some of the limitations of prior research studies on empathy.

In summary, a review of the psychological literature revealed that while adolescence is a period that has received much attention and debate, little research exists to explain the vicissitudes of the normal adolescent experience. Rather than considering methods to prevent problematic development, most research studies have focused on exploring treatment interventions to address pathological processes. Furthermore, since sex differences are often disregarded, adolescent development is commonly viewed as a generic experience. Although both males and females appear to negotiate adolescent development by maintaining positive parental attachments, females regularly sacrifice their
need to create a separate identity in favor of preserving relationship bonds. The purpose of this study is to investigate the relationship between parental attachments and resilient adaptation and to determine whether relaxation training, assertiveness training, and empathy training will have a significant effect on the development of resilient qualities in a sample of normal female adolescents.
CHAPTER III

Methodology

Subjects

Subjects were recruited from a population of female students in a middle class public high school in suburban New Jersey. Initial identification of subjects was based on the 16 year age requirement stipulated by the Parental Bonding Instrument (PBI) (Parker, et al., 1979) (Appendix A). Using a table of random numbers, an initial pool of possible participants were randomly selected from a total population of adolescent females falling between the ages of 15 years 11 months and 18 years 11 months. A final sample of (82) female subjects was randomly assigned to three treatment groups from the initial pool of possible participants. Based on research studies demonstrating the impact of family status on separation-individuation and empathy, groups were matched on family status - intact, divorced, or single-parent. All subjects were academically mainstreamed with no prior recorded history of physical disabilities, emotional problems or disruptive behaviors upon entry into the school system. This information was gathered from file data furnished by the guidance office.

Procedure

Parents of all female students fulfilling the age criterion received an introductory telephone call from this researcher to present information regarding the study (Appendix G). Those parents who expressed their willingness for their child to participate were sent both a parental consent form (Appendix H) and a student consent form (Appendix I). These forms were distributed during homeroom and returned by the student to the
guidance office. As a follow-up to the initial contact, this researcher volunteered to answer telephone calls in response to questions or concerns raised by parents and students. Supplementary promotions included verbal endorsements by the principal and members of the guidance department, visual posters in the hallways and common areas, and auditory morning announcements reminding students to return their consent forms.

Sample size was based on a formula advanced by Stevens (1996) that stipulates a 20 to one ratio between number of subjects and number of variables in order to implement multivariate statistical analyses (N = 20p (number of variables)). Calculating the number of variables (four) x 20, indicated a minimum sample size requirement of 80 subjects.

The sample of 82 subjects was randomly assigned to three treatment groups as follows: 1. an experimental group that received three treatment interventions over 10 weeks, 2. a placebo group designed as a support group focusing on adolescent life issues (hereafter referred to as the support group), and 3. a control group that fulfilled the no-treatment condition. Those participants in the experimental and placebo conditions were required to attend a 35-minute session during ninth period for 10 consecutive weeks. In order to administer the instruments, session one and session 12 were expected to extend between 30 and 90 minutes. Subjects in the control group met only for session one and session 12.

During session one, the PBI (Parker, et al., 1979) (Appendix A) was administered by the Master of Arts school counselor (Certified Drug and Alcohol Counselor, Certified Art Therapist) facilitating the three treatment conditions. The IRI (Davis, 1980) and the SITTA (Levine et al., 1986) were administered to subjects during session 12. The PBI (Parker et al., 1979) was not readministered during session 12 because it was used as a predictive covariate. No additional information was provided by the facilitator other than explanation
and clarification of instructions. Upon successfully completing the terms of the research contract, those students participating in the treatment and placebo conditions received one-half credit in community service. During session 12, all subjects were given a T-shirt and an after-school pizza party.

All groups were facilitated by the same Master of Arts school counselor who had been employed by the school system for five years and had both specialized training and experience in adolescent group process.

The experimental group consisted of three treatment interventions: stress inoculation training (Appendix D), assertiveness training (Appendix E), and empathy training (Appendix F). The sequence of interventions was determined by this researcher's view that the ability to self-regulate one's anxiety, the facility to assertively express one's needs, and the capacity to resonate with the feelings of others mirrors a developmental progression of ego functioning.

The first session of the experimental group began with self-introductions that included name, age, and grade. Each subject was presented with a notebook and encouraged to complete written homework assignments and to document personal notations throughout the research experience.

The stress reduction and progressive muscle relaxation exercises drawn from Meichenbaum's (1985) stress inoculation training model (Appendix D) were implemented during sessions two, three, and four. This intervention consisted of instruction in recognizing automatic anxiety responses, deep breathing, progressive muscle relaxation using isometric squeeze exercises, and cue-controlled relaxation.

The assertiveness training intervention, modeled on a design by McFall and Lillesand (1971), was a semiautomated procedure conducted over the next three sessions (Appendix
E). McFall and Lillesand (1971) were among the pioneers in empirically validating behavior modification approaches using direct training procedures to improve assertion skills (Rakos, 1991). Initially used in psychotherapy by Wolpe (1969), Wolpe and Lazarus (1966), and Bandura (1969), the methodology of behavior rehearsal, often including modeling and coaching, continues to be the most commonly used assertion training technique (Frisch, 1988; Fodor, 1992; Forman, 1993).

Within this study behavior rehearsal therapy consisted of three main components: covert response practice, symbolic verbal modeling, and therapist coaching (McFall and Lillesand, 1971). Each of the situations presented were chosen from training exercises utilized in a study by McFall and Lillesand (1971), McFall and Marston (1970), or from an assertiveness training manual by Galassi and Galassi (1977). Situations were selected based on their appropriateness for a high school population of female adolescents and taped by the therapist/facilitator for auditory presentation. This researcher adapted some situations to more contemporary issues.

The empathy intervention (Appendix F) was conducted during sessions eight, nine, and ten and utilized a combination of detailed instructional training with videotape modeling to increase both affective and cognitive empathic responses (Stone & Vance, 1976; Uhlemann, Lea, & Stone, 1976). Application of a bimodal intervention with both an auditory and visual component has been shown to increase empathic responses in children (Feshbach, 1978; Eisenberg & Miller, 1987). Prior studies indicated that detailed instructions and modeling can be presented in either order but must exist in combination with each other (Uhlemann, et al., 1976). The modeling-instructional format has been included in the methodology of the few contemporary studies which have attempted empathy training with an adolescent population (Hatcher, et al., 1994; Pecukonis, 1990).
The individuals in the videotapes were two female adolescents with a mean age of 17 years. Selection of figures of the same age and same sex was based on studies indicating "that similarity of attitude and sex between an observer and a stimulus person enhances empathic responsiveness" (Feshbach, 1978, p. 16). Situations were adapted from exercises designed to help individuals increase empathic responsivity (Egan, 1975).

During session eight the subjects were asked to identify human emotions. The modeling condition consisted of a 10 minute videotaped sequence in which two female adolescents demonstrated ineffective and effective examples of empathic responses. Videotaped instructions were then provided which consisted of the presentation of rules governing empathy with both negative and positive directives to elaborate the meaning of the rules (Stone & Vance, 1976; Uhlemann, et al., 1976).

Session 11 provided the opportunity to integrate the training interventions as well as prepare for termination of the group. Subjects were asked to share their experiences in the study, to discuss its strengths and weaknesses, and to make recommendations for future groups.

Session 12 consisted of administration of the Separation-Individuation Test of Adolescence (Levine et al., 1986) and the Interpersonal Reactivity Index (Davis, 1980).

The placebo group (hereafter referred to as the support group) utilized the same 12 week, 35-minute, once weekly format as the experimental group. Subjects in this treatment condition were facilitated by the same Master of Arts school counselor as the experimental and control groups. The first session began with self-introductions that included name, age, and grade. The facilitator emphasized the importance of being on time, attendance, member participation and confidentiality. This group was structured as a support group to explore personal issues pertaining to the stresses of adolescence, school, family life, and
interpersonal relationships. A primary objective of the support group was to develop a warm, trusting relationship within the group to encourage self-disclosure and supportive interactions. Posttest assessment measures were administered during session 12.

The control group met for one session during the initial week of the study and again at the end of the training program to complete the same assessment measures as the experimental and support groups. The same Master of Arts school counselor administered the scales, offering no further information other than what was contained in the original consent form.

Instruments

The Parental Bonding Instrument

The Parental Bonding Instrument (PBI) (Parker, Tupling, & Brown, 1979), designed to measure perception of parental Care and Protection/Control, was employed in this study as a measure of attachment history. Derived from the theoretical concept of a parent-child bond advanced by Bowlby (1969) and Rutter (1972), this instrument assesses the contribution of two major dimensions of parental bonding - parental Care and parental Over-Protection. Combining these two dimensions yields four basic patterns or quadrants of parental bonding: 1) Optimal Bonding (high Care-low Over-Protection); 2) Absent or Weak Bonding (low Care-low Over-Protection); 3) Affectionate Constraint (high Care-high Over-Protection); 4) Affectionless Control (low Care-high Over-Protection).

Based on recollections from the first 16 years of childhood, respondents are asked to complete a Likert scale ranging from 0 to 3 in response to 12 items tapping the domain of "Care" and 13 items tapping the domain of "Protection." The 12 items on the Care scale allow a maximum score of 36 and the 13 items on the Over-Protection scale permits a maximum score of 39. High Care scores (more than 24) suggest parental affection,
compassion, engagement, involvement, praise, and understanding while low Care scores (less than 10) indicate emotional coldness, neglect and rejection by the parent. High Protection scores (more than 22) describe parental control, overprotection, intrusion, excessive contact, infantilization, and prevention of independent behavior while low Protection scores (less than 12) indicate encouragement of independence and autonomy (Parker and Lipscombe, 1979). Two separate scores for Care and Over-Protection will be utilized in this study as representative of the subject's attachment history.

Initial instrument construction (Parker, et al., 1979) involved interviews with a sample of 150 respondents (Male=71, Female=79, Mean age=25 years) ranging in age of 17 to 40 years with two raters independently assigning a score from five to one for subjects' descriptions of each parent's "care" (p.3) and "overprotectiveness" (p.3). Factor analysis extracted two factors with the first factor, accounting for 28% of the total variance, clearly suggesting a "caring versus indifference/rejection" (p.3) dimension while the second factor, accounting for 17% of the total variance, represented a "control/overprotection versus allowance of autonomy and independence" (p.3) dimension. The first dimension was identified as a Care factor and the second dimension was termed an Over-Protection factor.

Pearson correlation coefficients yielded an estimate of internal consistency reliability of .704 (p<.001); test-retest reliability over a three week span of .761 (p<.001) for the Care scale and .628 (p<.001) for the Over-Protection scale; split-half reliability of .879 (p<.001) for the Care scale and .739 (p<.001) for the Over-Protection scale; inter-rater reliability of .851 (p<.001) for the Care dimension and .688 (p<.001) for the Over-Protection dimension. Concurrent validity of the scales of the two raters' scores for the Care
dimension were .772 (p<.001) and .778 (p<.001) and .478 (p<.001) and .505 (p<.001) for the Over-Protection dimension.

Although independence was achieved for three of the four quadrants of parental bonding, negative intercorrelations between scores on the Care and Over-Protection scales were significant (-.239, p<.001), suggesting that overprotection is linked with lack of care. While subsequent studies have also disclosed a relationship between these two dimensions, Burbach, Kashani, and Rosenberg (1988) conclude that the association between Over-Protection and lack of Care is non-significant when the effects of parental Over-Protections are partialled out.

Normative data was obtained in a sample of 500 non-psychiatric, medical patients (Mean age = 36 years, 39% males, 68% females, age range = 12 to 74 years) attending three general practitioners in Sydney, Australia who were considered to be representative of all social classes (Parker, et al., 1979). No significant relationships were found between social class, age, and gender for either the Care or the Over-protection scales. The lack of association between the age of the respondent and perceptions of parental attachment style indicated that reports of parental attitudes did not change over time but remained unaffected by the influences of social desirability, regardless of how far removed respondents were from childhood experiences. Similarly, in a study by Parker and Lipscombe (1980) assessing the PBI as an appropriate measure of maternal Over-protection, age of the parent was not a significant factor for mothers in both the experimental and control groups.

Possible influences of sex of both the parent and the respondent revealed that the sex of the child did not affect the parent's inclination to be caring or overprotective. However, when comparing mean scores for gender of the parent mothers were experienced as more
caring and somewhat more overprotective than fathers (Maternal mean scores: Care = 26.9, 
Over-Protection = 13.3; Paternal mean scores: Care = 23.8, Over-Protection = 12.5).

Although Mackinnon, Henderson, Scott, and Duncan-Jones (1989) determined that 
women reported their fathers as significantly more caring than did men (F(1,351)=5.56, 
p<.019), mean differences on each of the four scales were only small in size. Subsequent 
predictive validity studies of the PBI with twins (Kendler, 1996), depressed outpatients 
(Plantes, Prusoff, Brennan, & Parker, 1988; Gerlsma, Arrindell & Emmelkamp, 1991), 
women in brief therapy (Mallinckrodt, Coble, & Gantt, 1995), and Israeli high school 
students (Canetti, Bachar, Galili-Weisstub, Kaplan, DeNour, & Shalev, 1997) have not 
corroborated the results of MacKinnon et al. (1989). Parker (1990) contends that general 
population studies have described an overall tendency for mothers to rate as more caring 
and as more protective than fathers.

Mackinnon, et al. (1989) assessed the construct validity of the PBI in a 2-wave general 
population study of 386 randomly selected persons by investigating the relationship 
between parental style and adult mental health (Mean age = 40 years, age range = 18 to 87 
years). Confirmatory factor analysis using LISREL revealed uniformly high and positive 
loadings on both the caring factor and the protection factor with a small number of items 
loading in the range of .45 to .28 on the latter scale. Despite the incidence of moderate 
loadings on the Over-Protection scale, satisfactory replication of the original two-factor 
structure reported by Parker and Lipscombe (1979) attested to the internal validity of the 
instrument. Evidence of the stability of the Care and Overprotection scales over 4, 11, 21, 
and 34 weeks was evidenced in highly reliable test and retest correlations with a significant 
chi-square (X = 124.81, df =84, p<.003). Demographic variables indicated no significant
results for age and education but significant differences in mothers’ caring and protection as a function of marital status.

Heiss, Berman, and Sperling (1996) assessed the convergent and construct validity of the PBI with the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987); Parental Attachment Questionnaire (PAQ; Kenny, 1987); Attachment Style Inventory (ASI; Sperling, Berman, & Fagan, 1992); and Continued Attachment Scale (CAS; Berman, Heiss, & Fagan, 1994), all scales purported to measure continued parental attachment in late adolescence, in a sample of 216 college students. Factor analysis with oblique rotation of the 16 subscales revealed factor loadings for the PBI Overprotection and Care subscales as follows: Father as overprotective, r = -0.522; Mother as overprotective, r = -0.787; Mother as caring, r = 0.480; Father as caring, r = 0.629. Further correlations with instruments assessing loneliness, interpersonal dependency, state-trait anxiety, depression, and object relations demonstrated some evidence of construct validity between the factors and the personality or "criterion" variables. The authors conclude that these five instruments, including the PBI, demonstrate sufficient construct validity to assess the general affective quality of relationships as well as providing a predictive capacity to differentiate healthy from pathological bonding with parents.

Utilization of self-report instruments that attempt to retrospectively measure the quality of the parent-child relationship has met with some controversy among research psychologists. When evaluating the construct validity of the PBI, the question arises whether a causal relationship can be assumed by responses that reflect the actual behavior of parents or whether respondent’s scores reflect interpretations, perhaps only weakly linked to parental behavior, leaving the explanatory impact of causality unanswered (Mackinnon, Henderson, & Andrews, 1991). Yet, Parker (1983) maintains that the PBI
was designed as a phenomenological measure of perceived parental characteristics which are, in fact, far more likely than "actual" parental characteristics to influence development and establish causality. Attempts to evaluate the construct validity of the PBI as a measure of actual parenting include corroboration of respondent reports by siblings and parents which demonstrate only moderate correlations, ranging from .34 to .55, p<.005 (McCrae & Costa, 1988; Parker, 1983). Different ages and sex of siblings as well as the influence of variable environmental factors have confounded findings, leading to the use of twin studies as a far more valid method to assess the construct validity of the PBI.

Parker (1986) defined the logic of this approach as assuming that monozygotic (MZ) co-twins, as a consequence of shared genetic contribution and similar parenting, are likely to have similar attributional styles in perceiving and/or reporting characteristics of their parents. Therefore, highly correlated PBI scores would confirm this instrument as valid measure of parenting style (Parker, 1986). In a sample of 39 twin pairs (MX=18, DZ=21), mean correlations on the PBI scales of .70 and .71 for the MX and DX pairs, respectively, demonstrate that both sets of paired twins scored parents with remarkable similarity. Analyses for paired male and female twins (MZ females=.77, MZ males=.60, DZ females=.84, DZ males=.63) revealed associations of a similar order for each sex, further substantiating the construct validity of the PBI as a measure of parental characteristics.

Mackinnon, et al., (1991) evaluated the construct validity of the PBI in a sample of 336 twins, ranging in age from 18 to 63 years, who were raised by both parents for the first 16 years of life and had spent no more than two months separated from their co-twin. Statistical analyses were disaggregated by sex resulting in correlation coefficients ranging from -.02 for DZ males on the Protection scale to .78 for MZ females on the Care scale. Generally high agreement with a shared environment model fitting all scales except
maternal care, suggested that for female twins the ratings reflect the behavior of parents. However, substantially lower agreement between male twins without a well-fitting model of shared environment suggests that the scales may be affected by competition between twins or comparisons made by the respondent with his or her co-twin. When evaluating the disparities between these two twin studies, it is important to note that Parker (1986) did not include factor analyses for gender effects. Furthermore, Mackinnon et al. (1991) attributes the exceptionally low correlations on some of the dimensions to the presence of intrafamilial processes that may also impact the findings on other parent-child instruments. The authors propose that more definitive conclusions will be ascertained from longitudinal child development studies using similar populations and methodology.

Reliability studies of the PBI include investigations of multicultural, clinical, and non-clinical populations across gender and age. Short-term reliability was evaluated by Parker et al. (1979) in the seminal article and with a sample of Australian depressives initially depressed and then displaying significant improvement (Parker & Lipscombe, 1979). Over a nine-week interval, much higher correlation coefficients, ranging from .87 to .92 (p<.001), were evidenced than in the initial sample. In a subsequent American study (Plantes, et al., 1988) of depressed outpatients attending the Yale Depression Research unit, 48 depressives scored the PBI when depressed, and four-six weeks later, when significantly improved. Coefficients of agreement were slightly superior to the Australian depressed sample, ranging from .90 to .96 (p<.001) across the four scales, again confirming the reliability of the PBI. Parker, Fairley, Greenwood, Jurd, and Silove (1982) determined test-retest reliability to range from .58 to .77 (p<.001) in a group of schizophrenic patients. Low correlation coefficients were attributed to completion of the instrument shortly after hospital admission when exacerbated symptomatology impaired judgment and ability to
complete a self-report questionnaire. In an American study of 26 schizophrenic outpatients who completed the PBI (Warner & Atkinson, 1988), correlation coefficients ranging from .79 to .88 (p<.001) verify these findings and further validate the reliability of the PBI in a nondistressed clinical sample.

Data on moderate-duration reliability coefficients ranging from .79 to .81 (p<.001) was gathered in only one study by Richman & Flaherty (1987) for a non-clinical United States sample tested seven months apart.

Similarly, assessments of the long-term reliability of the PBI are meager with only one published study by Gotlib, Mount, Cordy, & Whiffen (1988) evaluating women in the post-partum period and then two to four years later (Mean=30 months). Nineteen depressed women and 23 non-depressed controls were assigned to one of three groups: depressed on both occasions of testing, initially depressed and then recovered, or not depressed on either occasion. Subjects completed only the maternal PBI with reported scores found to be non-significant (F2,36 = 2.76, p>.05) for the 30 months between assessments, indicating that perceptions of maternal caring and overprotectiveness were remarkably stable over time, despite fluctuations in mood.

In an effort to further substantiate the long-term reliability of the PBI, Wilhelm and Parker (1990) implemented a longitudinal study with 170 Australian college students having a mean age of 23.1 years at the outset of the investigation. Subjects were re-tested at three time intervals yielding highly consistent results over all three assessments. Mean correlation coefficients were .74 (1978-1983), .77 (1983-1988), and .65 (1978-1988), respectively. Reliability estimates for the PBI were compared with those obtained on four personality measures expected to exhibit similar longitudinal consistency determined by the immutability of personality. Correlation coefficients for the PBI were superior to those
obtained on the four personality measures (ranging from .50 to .64), further substantiating the PBI as a reliable measure of perceived parenting over an extended period of time.

Parker and Mater (1984) contends that evaluation of the construct validity of the PBI is not only assessed by what the instrument actually measures but is also determined by examining extraneous variables which may influence the scores (Parker, 1979). For example, "liking" a parent was associated with positive correlations on care scores for mothers (r=-.66) and fathers (r=-.62) and negative correlations on protection scores for both mothers (r=-.46) and fathers (r=-.42) (Parker, 1979). Social desirability influences were also confirmed by high Eysenck Personality Inventory lie scores (the tendency to give socially desirable responses) (EPI; Eysenck & Eysenck, 1964) being positively associated with parental care and negatively associated with parental protection (Parker, 1979; Parker, 1983). While associations were weak, Parker (1989) concluded that social desirability does not significantly influence subscale scores on the PBI.

The possible influence of mood state, specifically depression, on the perception or recall of experience has been regarded as a significant variable affecting self-report scores (Abraham & Whitlock, 1969; Raskin, Boothe, Reatig, Odle, & Schulerterberg, 1971; Paykel, Dienelt, & Myers, 1969; Blatt, Wein, Chevron, & Quinlan, 1979). In an effort to address methodological issues such as unclear diagnostic criteria for affective disorders, inadequate sample size, and absence of control groups, Parker et al. (1981, 1982 et al., 1989) assessed the reliability of the PBI with a clinical population to determine the influence between mood state and scores on the Care or Overprotection subscales. Using a sample of 36 outpatients and inpatients ranging in age from 18 to 63 years, a pre-test PBI was administered when subjects were clinically depressed followed by a post-test assessment when they were significantly recovered (Parker, 1981a). Pre-test/post-test correlations of
reliability ranging from .87 to .92 (p<.001) indicated that varying levels of depression did not influence PBI scores, further confirming perceptions of actual parental attachment experiences remained stable over time, regardless of mood state. No significant differences were found for either of the PBI subscales on a correlated t-test utilized to determine if depression caused all subjects to change their scores to a similar degree. Scores returned by other members of the patient's family and independent observers were found to correlate significantly with subject's scores (ranging from .24 to .74), additionally substantiating the construct validity of the PBI as a measure of actual parenting. Although not evidenced in the prior results, it is important to note that "plaintive set" (Henderson, Byrne, & Duncan-Jones, 1981) or relevant response bias of depressed patients to be more complaining, can result in scoring parents as both less caring and more protective, creating faulty correlations between predictor variables and neurotic symptoms as outcome variables.

When reviewing the literature on attachment (Bowlby, 1969; Rutter, 1980; Ainsworth, et al. 1978; Main, et al. 1987), the nature of the parent-child relationship emerges as a significant determinant of adult personality and psychopathology. The proposition that variable qualities of the parent-child relationship may place a child at risk for psychiatric disorder has generated a number of studies which utilize the PBI to explore this interaction. Specifically, Parker's (1979) term parental "affectionless control" (low care/high overprotection) has been linked with adult neurotic depression (Parker et al., 1982); anxiety neurosis (Parker, 1981); social phobia (Parker, 1979); obsessive compulsive neurosis (Hafner, 1988); and major depression, anxiety disorder, and mixed conditions (Torgersen 1990). Conversely, "affectionate constraint" (high care/high overprotection) (Parker et al. 1979) which appears to be more a consequence of developmental difficulties
in the child, is over-represented in those with higher dependency or hypochondriasis levels, in asthmatics, and in certain cultural groups (Parker, 1983) and in panic disorder (Silcove, Parker, Hadzi-Pavlovic, Manicavasagar, & Blaszczynski, 1991).

Substantiation of the predictive validity of the PBI has been examined with various diagnostic groups to evaluate perceived recent and earlier parenting attributes in schizophrenic patients (Parker, Johnston, & Hayward, 1988); to isolate family interaction variables as outcome factors for schizophrenic outpatients (Kazarian, Baker, & Helmes (1987); to assess perceived attitudes of schizophrenic patients to rehospitalization (Baker, Kazarian, Helmes, Ruckman, & Tower (1987); and to longitudinally investigate perceptions of early parenting and depression (Godib, et al. 1988). Parker, et al. (1982) investigated whether the PBI, like the Expressed Emotion measure (EE; Kuipers, 1979), could predict schizophrenic relapse. A sample of 78 schizophrenics were required to complete the PBI shortly after hospital admission, and when judged to be clinically improved. Mean PBI scores on each of the subscales were remarkably similar for the two assessment periods with 85% of the patients assigning one or both parents to the low Care/high Protection quadrant. Seventy-five percent of patients readmitted during a nine-month follow-up period were more inclined to have scored one or both parents as less caring and as more protective on index admission, while those who assigned neither parent to this quadrant had a 25% chance of readmission. Low maternal care was significant at retest for the subgroup of those having parental contact (Z=2.01, p<.05) and the subgroup of those discharged to live with their parents (Z=1.97, p<.05). Using identical methodology as the prior study, Parker and Mater (1986) determined that the PBI was able to predict 83% of schizophrenic patient's readmissions as compared with 69% predictability for the EE scale.
Parental care and protection scores on the PBI were employed to predict outcomes for 62 in-patients over a one-year course of schizophrenia (Warner and Atkinson, 1988). By factoring age, onset of illness, and medication compliance into a discriminant function analysis, high predictive accuracy, ranging from 90% to 100%, was achieved. For those subjects in frequent contact with parents, the PBI accurately predicted 59% to 73% of good and poor outcome categories, whereas outcomes for subjects in rare contact with parents were predicted with 64% to 85% accuracy. Higher predictive values were attributed to administration of the PBI when patients were free from acute psychotic features.

Paris, Frank, and Buonvino (1991) utilized PBI scores to predict changes in global assessment of functioning (GAF) scores on the DSM-III-R in a sample of 251 psychiatric outpatients classified by Axis II diagnoses in Cluster A (schizoid, schizotypal, and paranoid personality disorders), Cluster B (borderline, narcissistic, histrionic, and antisocial personality disorders), or Cluster C (compulsive, avoidant, dependent, and passive-aggressive personality disorders). PBI scores were not predictors of changes in GAF scores, but were able to differentiate patients in the three clusters and in a comparison group without an Axis II diagnosis with 43% accuracy. The authors concluded that these findings not only verified the discriminant validity of the PBI but provided further evidence for the contribution of childhood environment to the etiology of adult disorders.

A review of the literature revealed several cross-cultural studies assessing the validity and reliability of the PBI in both clinical and nonclinical populations. Furukawa and Shibayama (1993) utilized the PBI to predict maladjustment of exchange students in different cultures. When used in combination with the Maudsley Personality Inventory (MPI; MPI Research Group, 1969) and the People in Your Life measure (PIYL; Marziali,
1987), discriminant function analysis determined that the PBI demonstrated a strong 72% predictive power.

The Dutch version of the PBI was administered to a sample of students, normals, and phobic outpatients to ascertain whether the two-dimensional model of Care and Protection could be replicated (Arrindel, Hanewald, and Kolk, 1989). Robust coefficients of congruence were all in excess of .80, with most being well above .90, attesting to a high degree of similarity between rational-theoretical and empirical PBI dimensions. Factor replicability across sex and age groups was similarly strong with the majority of coefficients (96%) smaller than .20. Cronbach alpha measures of internal consistency ranged from .83 to .91 while inter-item r's, although more modest (ranging from .3 to .5), were still acceptable. The authors concluded that the strong psychometric properties of the PBI support both the cross-sample invariance and the cross-national constancy of the major dimensions of parental rearing behavior.

Gomez-Beneyto, Pedros, Tomas, Aguilar, and Leal (1993) administered a Spanish translation of the PBI to a sample of 205 Hispanic female obstetric patients, three days after childbirth. Analyses of the Spanish version of the PBI revealed similar psychometric features to those described in other cultures (Arrindel et al. 1989; Parker et al. 1979). However, comparable results in the factor structure analysis as those obtained by Cubis, Lewin, & Dawes (1989) suggest that the predictive power of the Control dimension may be improved by splitting it into two subfactors, "Overprotection" and "Restraint". Average scores obtained for Care (27.5) and Control (15.2) were consistent with average scores in Australia for Care (27) and Control (13.5) (Parker et al., 1979) as well as in the United States findings for Care (28) and Control (12.8) (Plantes, et al. 1968). Results of estimates
of internal consistency, ranging from .77 to .93, were considered adequate and consistent with those reported in Parker's (1990) review of the psychometric properties of the PBI.

Although most studies using the PBI have been conducted with adult subjects, a modest amount of research exists with both clinical and nonclinical samples of adolescents in a multicultural context. Parker and Lipscombe (1979) compared perceptions of parenting by children of Jewish and Greek families living in Australia with those of Australian-born controls. Jewish subjects rated their mothers as less caring than controls, while Greek girls scored both their mothers and fathers 70% higher on the Over-Protection subscale than Australian controls.

A normative study with a large Australian adolescent community sample (N=2,147, Mean age = 15.4 years) supported the psychometric properties of the PBI (Cubis, et al. 1989). Using a principal components solution with an oblique rotation revealed three factors - Care (C), Protection - Social Domain (PS), and Protection - Personal Domain (PD), accounting for 36% to 45% of the variance. Correlation coefficients were high [.99 (C), .95 (PS), and .93 (PP)] - confirming the internal consistency reliability of the subscales. Effects for sex indicated that females saw their parents as more caring (F=29.41, p<.001) and more intrusive in Protection - personal domain (F=11.40, p<.01), while sons viewed their fathers as much less intrusive (F=73.22, p<.001). Males and females tended to have similar perceptions of their fathers on the Care scale but markedly different perceptions of their mothers (F=28.06, p<.001). Cubis et al. (1989) suggest that based on patterns of gender differences in the social and personal domains, a three-factor solution may provide a better description of the dimensions of control in an adolescent population. However, it appears that despite some disparate results, these findings generally support the dimensions
and associations reported by Parker (Parker, et al. 1979; Parker, 1983), making the PBI a valid instrument for use in adolescent psychosocial research.

In studies with at-risk adolescents, researchers have found the predictive accuracy of the PBI to play a role in identification of vulnerable adolescents by elucidating aspects of adolescent-parent interactions. Howard (1981) determined that chronic male adolescent offenders, classified as antisocial personalities, perceived mothers as less caring than adolescent males delinquents, classified as first time offenders. Low maternal Care scores and high Over-Protection scores significantly discriminated subjects with Conduct and Oppositional disorder from normal controls (Rey & Plapp, 1989). Perceptions of mothers as more caring and more controlling than fathers were verified as predictive of distress and isolation in Israeli adolescents (Canetti, et al. 1997). An investigation of the relationships between parenting style and suicidal thoughts, acts and depression used the PBI as a predictor of adolescent vulnerability (Martin and Waite, 1993). Those adolescents who assigned parents to the "affectionless control" quadrant doubled the relative risk for suicidal ideation, increased the relative risk of self-harm three-fold, and heightened the relative risk for depression five-fold. Similar representations of low parental care and high parental overprotection were evidenced in studies with adult women who attempted suicide (Goldney, 1985). Thus, it appears that scores on the PBI are not limited to distinct developmental stages but can be influenced by parents displaying appropriate shifts in care and protective responses as a result of age-appropriate changes in the child (Parker, 1984).

While the psychometric properties of the PBI have been widely normed and validated on clinical, nonclinical, and cross-cultural populations, the bulk of the research has been conducted by the instrument's author, causing some concern regarding experimenter effects. As was determined in the seminal article, low correlations between the Care and
the Over-Protection subscales have given rise to questions pertaining to the two-factor structure of the instrument. Several studies have recommended that the Over-Protection scale be factored into two subscales that might more accurately describe the concept of control. Although methodological issues may have affected replicability of the internal structure of the PBI, most studies have confirmed both the construct and content validity of the instrument. However, despite these limitations, the PBI appears to demonstrate sufficient evidence of reliability and validity to consider it as a useful instrument for assessing the quality of parental attachments.

The Separation-Individuation Test of Adolescence

The Separation-Individuation Test of Adolescence (SITA; Levine, Green, and Millon, 1986) was developed to evaluate psychological separation during adolescent development. The instrument contains 103 items with scores derived from a five-point Likert scale ranging from "strongly agree or is always true for me" to "strongly disagree or is never true for me."

Based on the theoretical model proposed by Mahler (1975), this instrument conceptualizes six dimensions of adolescent separation-individuation: 1. Nurturance-Symbiosis: describes individuals who have strong dependency needs manifested in expectations of fusion with another person. 2. Engulfment Anxiety: describes individuals who are threatened by close interpersonal relationships due to fears of loss of selfhood. 3. Separation Anxiety: describes individuals with profound fears of losing emotional or physical contact with an important other, accompanied by feelings of rejection or abandonment which can be manifested as anxiety or depression. 4. Need Denial: describes individuals who avoid or deny dependence needs as a defense against anxiety associated with separateness. 5. Self-Centeredness: describes individuals with a high degree of
narcissism reinforced by external sources of admiration and 6. Healthy Separation:
describes individuals who have made meaningful progress toward resolution of the conflicts
associated with separation-individuation (Levine, et al. 1986).

Preliminary selection of item content was determined by eight raters, familiar with the
theoretical basis of the test, asked to sort 119 test items into their individual dimensions on
the SITA subscales. Adequate theoretical-substantive validity, or the degree to which a
particular item is measuring a specific construct, was achieved for items sorted correctly by
six of the eight raters, with items failing to meet this criterion revised or eliminated. This
process was repeated three times until a group of 100 items, evenly distributed among the
six scales, was comprised.

Using a sample of 305 subjects drawn from a high school (Mean age = 15), college
freshmen (Mean age = 18), and upper class university (Mean age = 21.5) population, the
researchers examined the factor structure of the SITA by extracting principal components
which were then rotated to a Varimax criterion. Results of the internal-structural validation
(the degree to which the statistically derived factor structure conforms to the theoretical
basis of the instrument) determined that 19 of the 20 items loading highly and uniquely on
Factor 1 were from the SITA Self-Centeredness scale and contributed 32.9% of the
variance. Eleven of the 12 items loading highly and uniquely on Factor 2 were from the
SITA Denial scale and contributed 21.8% of the variance. Accounting for 11.6% of the
variance, of the 11 items loading highly and uniquely on Factor 3, six were from the SITA
Separation Anxiety scale, four from the Engagement Anxiety scale, and one from the Need
Denial scale. On Factor 4, which accounted for 12.2% of the variance, 10 of the 14 items
loading highly and uniquely were from the SITA Nurturance-Symbiosis scale, three from
the Separation Anxiety scale, and one from the Healthy Separation scale. On Factor 5,
contributing 7.9% of the variance, all eight high and unique loadings were from the SITA's Engulfment Anxiety scale. On Factor 6, six of the seven high and unique loadings were from the SITA Nurturance Symbiosis scale, accounting for 7.7% of the variance (Levine, et al., 1986).

Additionally, point biserial correlations between each of the SITA test items and the six major theoretically derived scales were computed. Test items that did not meet a criteria of 1) correlations of .35 or greater between an item and its intended SITA scale and 2) no secondary correlations with a scale other than its intended SITA scale were eliminated. Based on these criteria, a total of 28 items were eliminated, thereby, reducing the instrument to 76 items.

In order to substantiate external criterion validity (the degree to which the constructs of one instrument correlate to like constructs on another instrument), 181 subjects completed both the SITA and the Millon Adolescent Personality Inventory (MAPI) (Millon, Green, & Meagher, 1882). After classifying subjects into the MAPI personality types using high-point codes, one-way analyses of variance for each of the scales of the revised 76 item SITA were computed to ascertain if significantly different scores were achieved by the various personality groups and if such differences established external validity for the SITA. All six of the SITA scales demonstrated a significant difference between the scores of the personality groups classified by the MAPI, providing strong evidence for the concurrent validity of the SITA (numerical data substantiating these analyses were not included in the reprint of this study). However, some evidence of interrelatedness among scale items, led the authors to conclude that the process of separation-individuation during infancy may become differentially manifest during adolescence and should, therefore, be targeted by discrete SITA scales.
McClanahan & Holmbeck (1992) evaluated the construct validity of the SITA in a multicultural sample of 454 college students (females = 272; males = 182) designed to assess separation-individuation, family functioning, and psychological adjustment using a battery of self-report family and adjustment measures. Pearson product moment correlations between each of the seven SITA scales were computed to determine if the scales were interrelated. Findings revealed the following intercorrelations: 1) Separation-Anxiety correlated significantly to Nurturance-Seeking r=-.37, p<.001; 2) Enmeshment-Seeking correlated significantly with Nurturance-Seeking r=-.19, p<.001; 3) Engulfment-Anxiety correlated significantly to Separation-Anxiety r=-.24, p<.001; 4) Separation-Anxiety correlated significantly with Enmeshment-Seeking r=-.32, p<.001, indicating a lack of separateness among scales representing overdependence. Intercorrelations were also present between the following scales: 1) Self-Involvement correlated significantly with Nurturance-Seeking, r=-.18, p<.001 and Enmeshment-Seeking, r=-.30, p<.001 and 2) Health-Separation correlated significantly with Enmeshment Seeking, r=-.44, p<.001 and Self-Involvement, r=-.30, p<.001, again implying that these scales may be tapping similar dimensions of separation-individuation.

Within the same population of 454 college students, McClanahan and Holmbeck (1992) determined that significant correlations exist between the SITA scales and other measures of family relations and adjustment. Subjects scoring higher on the SITA scales for Healthy-Separation and Self-Involvement scored lower on measures of negative psychological adjustment (r= -.15 and -.18, Depression; r=- .40 and -.34, Loneliness; r=- .20 and -.15, Anxiety-State; and r=- .17 and -.23, Anxiety-Trait, respectively, p<.001) and higher on measures of positive adjustment and positive family functioning (r= .28 and .48, Self-Esteem; r=.31 and .28, Social Support; and r=.20 and .20, College Adjustment,
respectively, p<.001). Elevations on the Separation-Anxiety scale were positively and significantly correlated with elevations on Depression, r=.27; Loneliness, r=.13; State Anxiety, r=.27; and Trait Anxiety, r=.23 (p<.001). Engulfment Anxiety and Separation Anxiety correlated negatively to Attachment to Mother r=-.48 and r=-.07, respectively (p<.001).

Cluster Analyses were performed to compute z scores for each of the subscales, thereby "fusing" similar subjects into groups. Results revealed patterns for individuals in the following four clusters: Cluster 1 (Anxious Deniers, N=96) tended to have high scores on the SITA scales for Separation-Anxiety, r=.40; Engulfment-Anxiety, r=.46; and Dependency-Denial, r=.56; and low scores on the Self-Involvement, r=-.53; and Healthy-Separation, r=-.53, scales; Cluster 2 (Healthy Separators, N=96) tended to have high scores on the SITA scales for Healthy-Separation, r=.31, and low scores on Separation-Anxiety, r=-.31; Engulfment-Anxiety, r=-.64, and Dependency-Denial, r=-.40; Cluster 3 (Peaceful Detachers, N=153) had high scores on Engulfment-Anxiety, r=.31, and low scores on Separation-Anxiety, r=-.33, and Nurturance-Seeking, r=-.31; Cluster 4 (Succorance Seekers, N=109) tended to score high on SITA scales for Nurturance-Seeking, r=.54, and Separation-Anxiety, r=.38.

In conclusion, based on the results of the item-level analysis, McClanahan and Holmbeck (1992) determined that many of the scale labels do not reflect the item content of the scales and could be relabeled to reflect both the nature of the items as well as their referents. Furthermore, because the Healthy-Separation scale appears to tap both a healthy need for closeness and a healthy need for distance, two separate scales may be preferable. However, despite these two caveats, the correlational and cluster analytic findings revealed a coherent and sensible relationship between SITA scales with other
psychological indices, thereby, supporting the construct validity of the SITA as a valid measure of separation-individuation.

Levine and Saintonge (1993) reassessed the psychometric properties of the SITA in a clinical population of 117 subjects ranging from 12 to 22 years (males = 64, females = 53, mean age = 16.3 years) drawn from residential treatment centers and outpatient settings. Modifications in the original instrument included subdivision of the Enmeshment Seeking Subscale into the Peer Enmeshment and Teacher Enmeshment Subscales and renaming of the Self-Centeredness Subscale to Practicing-Mirroring which better illustrates the targeted concepts drawn from Mahler's theoretical description of early childhood separation-individuation. Additionally, a new subscale, Rejection Expectancy, comprised of 15 new items, was designed to assess the theme of emotional callousness and indifference from significant others. Therefore, the current form of the SITA consists of nine subscales with a total of 103 items.

Internal-structural properties were evaluated by Levine & Saintonge, (1993) using Cronbach's coefficient alpha and factor analytic patterns, while external correlates were examined with the Millon Adolescent Personality Inventory (MAPI) (Millon, Green, & Meagher, 1982) and clinical ratings on the Clinician Rating Scale of Separation-Individuation (CRSSI) (Levine, 1994) and the Clinician Rating Scale of Borderline and Narcissistic Psychopathology (CRSBNP) (Levine, 1994). Elucidation of the nature of the constructs being assessed by the SITA subscales was demonstrated through a comparison of the psychometric convergence and divergence between the clinical sample and the original validation study.

Scores on the SITA and the MAPI were compared with scores obtained from the 305 high school and college students in the original sample. Cronbach Coefficient Alpha for
the SITA Subscales are as follows: Separation Anxiety Clinical = .68, Nonclinical = .77; Engulfment Anxiety Clinical = .75, Nonclinical = .77; Dependency Denial Clinical = .74, Nonclinical = .79; Practicing-Mirroring Clinical = .85, Nonclinical = .88; Peer Enmeshment Clinical = .74, Nonclinical = .75; Healthy Separation Clinical = .64, Nonclinical = .64; Nurturance Seeking Clinical = .74, Nonclinical = .70; Teacher Enmeshment Clinical = .79, Nonclinical = .75; Rejection Expectancy Clinical = .79, Nonclinical (not included). With the exception of the Separation Anxiety and Healthy Separation subscales, all Cronbach Coefficients were above .70, indicating an adequate measure of internal structure and theoretical consistency.

Principal components factor analysis using Varimax rotation with a Scree test generated seven meaningful item clusters in the clinical group in contrast to the eight-factor solution in the nonclinical sample. The eigenvalues for the first 15 factors obtained ranged from 8.9 to 1.7 in the clinical sample and 8.5 to 1.4 in the nonclinical sample. Factor 3 in the clinical sample appeared to represent both the Separation Anxiety and Nurturance Seeking subscales. Significant congruent coefficients were also evidenced between Factor 3 (Separation Anxiety) and Factor 7 (Nurturance Seeking) in the nonclinical sample. These results supported the prediction that the factors representing the same subscales in the two samples would have significant congruence correlational coefficients and that factors that represented different subscales in the two samples would not have significant congruence coefficients. All predictions were validated with the exception of the Peer Enmeshment factor of the nonclinical sample correlating with both the Peer Enmeshment and the Dependency Denial factor in the clinical sample (Levine & Saintonge, 1993).

Pearson correlations between the SITA subtest scores for clinical subjects and the MAPI scores for clinical subjects were significant, giving further support to the theoretical
construct validity of the SITA subscales. The findings are as follows: 1) SITA subscale Separation Anxiety correlated with MAPI Inhibited personality type (.30, p<.01), Sensitive personality type (.30, p<.01), and Dependent personality type (correlations not given), all commonly characterized by abandonment concerns. Significant negative correlations were revealed with Sociable (-.30, p<.01), Confident (-.28, p<.01), and Introversive (-.41, p<.001) MAPI personalities distinguished by their social and personal confidence and schizoid adaptations; 2) SITA subscale Healthy Separation correlated consistently with the MAPI Sociable personality type (.25, p<.01) and Confident personality type (.37, p<.001) which are characterized by sociability and self-confidence and negatively with MAPI Inhibited (-.34, p<.001) and Sensitive (-.29, p<.01) which are associated with interpersonal discomfort and turbulence; 3) SITA Nurturance Seeking subscale revealed no positive consistent correlations, but did correlate negatively with MAPI Introversive personality type (-.24, p<.05); 4) SITA Dependency Denial subscale correlated with MAPI Introversive personality type (.23, p<.05) and Inhibited personality type (.21, p<.21) characterized by interpersonal detachment. Negative correlations were evidenced with MAPI Sociable personality type (-.29, p<.01) and Confident personality type (-.26, p<.01); 5) SITA Practicing-Mirroring subscale correlated significantly with MAPI Confident personality type (.54, p<.001) and Sociable personality type (.41, p<.001) and consistently and negatively with Inhibited personality type (-.49, p<.001) characterized by social avoidance; 6) SITA Teacher Enmeshment subscale correlated consistently and positively with MAPI Respectful personality type (.28, p<.01) characterized by features of compliance, propriety, and responsibility. Consistent negative correlations were exhibited with Forceful personality type (-.21, p<.05) characterized by antisocial and aggressive features; 7) SITA Engulfment subscale correlated with MAPI Sensitive personality type
.31, p<.01) characterized by deeply conflicted and chaotic interpersonal relationships; 8) SITA Peer Enmeshment subscale correlated with MAPI Sociable personality type (.28, p<.01) and Confident personality type (.31, p<.001) and negatively with Introversive (-.26, p<.01) and Inhibited (-.29, p<.01) personality type; 9) SITA Rejection Expectancy subscale correlated with MAPI Inhibited personality type (.49, p<.001) and Sensitive personality type (.43, p<.001) and negatively with Sociable (-.37, p<.001) and Confident (-.42, p<.001) personality type.

The point biserial correlations between SITA scores and clinicians' ratings using the CRSSI and the CRSBNP indicated few significant correlations that ran counter to the general constructs behind the SITA subscales. Two exceptions were the Rejection Expectancy and Separation Anxiety subscales with the latter actually correlating more strongly with ratings of nurturance seeking (r=.32, p<.001) than with ratings of separation anxiety (r=.19, p=.05). In light of these findings, it appears that the working constructs upon which the SITA are based seem to be intact while the precise construct meaning of the subscales is less exact and requires additional refinement, particularly with respect to a clinical sample.

Kroger and Green (1994) examined the internal structural properties of the SITA in a sample of 131 late adolescent New Zealand university student volunteers in 1990 (Females = 84, Males = 47 with a mean age of 19.8 and 19.2 years, respectively) and two years later in 1992 with the same individuals (Females = 52, Males = 27 with a mean age of 21.4 and 22.0 years, respectively). Subjects identified themselves as European, Maori or Pacific Island, and Asian. Estimates of internal consistency reliabilities (Cronbach's alpha) and Pearson test-retest correlations for subscales indicated that six of the nine scales attained alpha coefficients above .70. In 1990, exceptions were the Separation Anxiety (.68),
Nurturance Seeking (.63), and Healthy Separation (.19) subscales, whereas in 1992 all but the Separation Anxiety (.66) and Healthy Separation (.33) subscales had alpha coefficients above .70. Test-retest correlations ranged from .33 to .84 with Separation Anxiety (.57), Peer Enmeshment (.46), Teacher Enmeshment (.50), Dependency Denial (.62), Practicing Mirroring (.65) and Healthy Separation (.33) subscales demonstrating less internal structural consistency, while Engulfment Anxiety (.70), Rejection Expectation (.71), and Nurturance Seeking (.84) subscales were remarkably robust. Principal components analyses rotated to a Varimax solution, conducted separately for the 1990 and 1992 samples, provided a seven-factor solution accounting for 36.9% and 41.1% of the variance, respectively. Evidence of the inclusion of distinct and conceptually meaningful clusters of additional items on some of the subscales may be explained by differences in the late adolescent separation-individuation process as compared with the broad developmental variations encompassed by Levine's sample. Essentially, however, Kroger and Green's (1994) findings are similar to those obtained by Levine et al. (1986) and Levine (1994) for both nonclinical and clinical samples despite different sample sizes, age ranges, personality characteristics, and geographic locations as well as some differences in the factor analytic procedures used.

Holmbeck and Wandrei (1993) evaluated individual and relational predictors of adjustment using six of the seven subscales of the SITA (Self-Centeredness subscale does not tap relational issues) in a sample of 286 college freshmen (Males = 104, Females = 182, Mean age = 18.29). Canonical correlation analyses revealed that Separation Anxiety (.52), Enmeshment Seeking (.64), and Healthy Separation (.52) were significant positive predictors of adjustment while Dependency Denial (.81) was significantly negatively related to successful college adjustment for women (F(45,860) = 5.60). These findings substantiate
the criterion validity of the SITA by predicting that women who are excessively connected to significant others and exhibit high levels of separation anxiety and enmeshment seeking may have different pathways to adjustment difficulties than men in their freshmen year in college.

Rice, Cole, & Lapsley (1990) evaluated the construct and predictive validity of the SITA to determine the relationship between adolescent separation-individuation, family cohesion, and college adjustment. The Healthy Separation subscale and the Separation Anxiety subscale from the SITA, the Separation Anxiety Test (SAT; Hansburg, 1972, 1980), and the Psychological Separation Inventory (PSI; Hoffman, 1984) were utilized as indices of individuation in a sample of 240 subjects from introductory psychology classes (men = 138, women = 102, mean age = 19.32). Cronbach alphas determined adequate internal consistency for the Separation Anxiety subscale (Group 1 = .68, Group 2 = .71) and Healthy Separation subscale (Group 1 = .80, Group 2 = .82). Zero-order correlations revealed no significant correlation between the Healthy Separation subscale with any of the other measures (median r = .01), suggesting some ambiguity as to what this subscale was assessing. The Healthy Separation subscale was excluded from subsequent analyses based on poor correlational results and a lack of unambiguous loadings on the preliminary two-factor solution analysis. Significant negative loading of the Separation Anxiety subscale on the second factor, Positive Separation Feelings (−.56), suggests that this subscale is assessing feelings associated with particular separation experiences rather than the degree to which one is functionally, attitudinally, and emotionally independent from parents (Factor 1, Independence From Parents). Linear structural equation modeling further confirmed the goodness-of-fit of the Separation Anxiety subscale on the Positive Separation Feelings factor. Positive feelings about separation predicted successful adjustment to the college
environment, leading to the conclusion that the negative relationship between the Separation Anxiety subscale and Factor 2 adequately confirms the criterion validity of this dimension of the separation-individuation process.

While numerous studies exist which have utilized the SITA to study a wide range of adolescent issues such as ego identity status (Papini, et al. 1989), adolescent sexual self-disclosure (Papini, et al. 1988), eating disorders (Rhodes & Kroger, 1989), and family marital status (Schaeffer, 1989), age norms, cross-cultural studies, and estimates of reliability are still lacking. Based on the results of the studies reviewed above, it appears that the major reservations regarding the SITA focus on significant intercorrelation between scales, inadequate sampling of the domains of interest, lack of longitudinal testing, and weaknesses associated with self-report measures (McClanahan & Hombeck, 1994). While Levine (1994) acknowledges these shortcomings, he also maintains that by refining item content and combining sets of SITA scales, preservation of Mahlerian theoretical underpinnings may be compromised.

Although reliability and validity assessments of the SITA are still in question, Fishler, Sperling, & Carr (1990) state that the SITA is "theoretically compelling and apparently structurally valid" (p.509). Furthermore, despite its known limitations, the SITA has been more widely reviewed and refined for reliability and validity than any other instrument available to assess the separation-individuation process in adolescents.

The Interpersonal Reactivity Index

The Interpersonal Reactivity Index (IRI; Davis, 1980) is a 28-item self-report multidimensional individual measure of empathy. Rather than regarding empathy as a single, unipolar construct which is either cognitive or affective, the IRI considers empathy as a set of constructs that, while related through responsivity, are clearly discriminable from
each other. Davis (1980) designed the scale to "capture separately individual variations in cognitive, perspective-taking tendencies of the individual as well as differences in the types of emotional reactions typically experienced" (p.4).

The first version of the instrument utilized a pool of over 50 items (Davis, 1980). Although some of the items were borrowed or adapted from other measures (i.e. Mehrabian & Epstein (1972) emotional empathy scale; Stotland, Mathews, Sherman, Hansson, & Richardson's (1978) Fantasy-Empathy scale), the majority were newly written items that were designed to measure either cognitive aspects of empathy or any variety of emotional responses to the observed emotional experiences of others. This instrument was administered to 201 males and 251 females using a five-point Likert scale ranging from 0 (does not describe me well) to 4 (describes me very well).

Preliminary factor analyses of the data (Joreskog Factor Analysis; oblique rotation; delta = 0) revealed the presence of four major factors for males and females separately. The four factor clusters may be described as follows: fantasy items, which indicated by a tendency of the respondent to strongly identify with factitious characters in books, movies, or plays; perspective-taking items, which revealed a tendency or capability of the respondent to adopt the perspective, or point of view, of other people; empathic concern items, which evaluated a propensity for the respondent to experience feelings of warmth, compassion, and concern for others enduring negative experiences; and personal distress items, which suggested that the respondent experienced feelings of discomfort and anxiety when observing the negative experiences of others (Davis, 1980).

The second version of the empathy questionnaire utilized the factor analysis results as a "heuristic tool" (Davis, 1980, p.4) in order to refine items so as to better measure the domains conceptualized by the four primary factors. A 45-item version included items
duplicated from the initial questionnaire, items adapted from that questionnaire, and new items designed to correspond to one of the four empathy factors previously described. This instrument was administered in large group testing sessions to 221 males and 206 females as partial fulfillment of a course requirement in an introductory psychology class. Separate JOreskog factor analyses using oblique rotation (delta = 0) were conducted on the data from male and female respondents, revealing nearly identical factors emerging in both sexes as those obtained in the first analysis. A low frequency of items loading on more than one factor as well as minimal loading of items on more than one intended factor provided strong support for the multidimensional approach to empathy and the validation of the four constructs uncovered in the preliminary questionnaire. Those items loading most heavily in both males and females on their respective factors were selected for inclusion on the corresponding subscale. The few items that loaded heavily on two or more factors were eliminated. Cronbach's standardized alpha coefficients for the final four empathy scales are as follows: Fantasy Scale (FS) Males, .78; Females, .79; Perspective-Taking Scale (PS) Males, .71; Females, .75; Empathic Concern Scale (EC) Males, .68; Females, .73; Personal Distress Scale (PD) Males, .77; Females, .75.

In a third version of this study (Davis, 1980) designed to confirm the final empathy questionnaire, the instrument was administered to 579 males and 582 females from introductory psychology classes who had not taken either of the prior two versions. JOreskog factor analyses using oblique rotation of factors provided strong support in both males and females for four factor subscales. Internal reliability coefficients were comparable to those previously determined indicating that the factor structure remained constant over administration to two independent samples.
Test-retest reliabilities in a sample of 56 males and 53 females over an elapsed time of 60 to 75 days between first and second administration resulted in correlations ranging from .61 to .79 for males and .62 to .81 for females. These correlations indicate satisfactory temporal stability for both sexes over time.

Significant differences were exhibited between males and females, with women displaying higher scores than men on each of the four subscales. The most striking difference was manifested on the FS measuring emotional reactivity with women acquiring a mean score of 18.75 and men, a mean score of 15.73, F(1,176) = 96.28; p < .001. The smallest amount of gender difference was displayed on the PT scale which measures role-taking tendencies with a mean score for women of 17.96 and a mean score for men of 16.78, F(1,180) = 18.25; p < .001. On the other two subscales, mean scores for women and men were as follows: EC, 21.67 vs. 19.04, F(1,180) = 120.09; p < .001; and PD, 12.28 vs. 9.46, F(1,181) = 103.10; p < .001. These findings attest to the construct validity of the IRI as determined by previous research in gender differences in which women received higher scores than men on measures of empathy (Dymond, 1949, 1950; Mehrabian & Epstein, 1972; Hoffman, 1977).

Evaluation of subscale intercorrelations supported the four-factor structure of the IRI and the relative independence of the subscales. A correlation of approximately .10 in both genders between the FS and the PS, while significant, was modest in size given the large size of the sample (500 males and 500 females). The EC and the PD subscales were virtually statistically independent (r = .11 for males; r = .01 for females). With respect to gender, a moderate correlation exists between the FS and the EC subscale (r = .33 and .30) but little relationship with personal distress. PS is positively related to EC (r = .33 and .30) but somewhat negatively correlated to PD (r = -.16 for males and -.29 for females). These
results suggest that although some association exists between cognitive and emotional empathic dispositions, the relationships are not sufficiently robust to imply that the subscales are measuring the same construct. Further, these intercorrelations indicate that one's standing on a particular subscale is not a powerful predictor of scores on other subscales, thereby, allowing for a variety of "empathy constellations" (Davis, 1980, p.15) possible from this instrument.

Finally, the significant positive correlation in both genders between the PT and the EC subscales, combined with the significant negative correlation between the PT and PD scales supports Hoffman's (1976) developmental theory concerning the transformation of empathic tendencies from self-centered personal distress in children to greater perspective-taking tendencies, permitting other-oriented concerns in adults.

A follow-up study by Davis (1983a) validated the multidimensional approach to empathy by investigating the influence of individual differences on empathic emotion and personal distress in a sample of 84 male and 74 female university students. Findings supported the hypothesis suggesting that observed effects of individual differences on emotional reactions would be due to variations in emotional empathy (EC subscale) and not to variations in cognitive empathy (PT subscale). Zero-order correlations revealed that PT subscale scores were unrelated to either of the emotional reactions measured by the EC and PD subscales (mean r = .04) while the EC subscale demonstrated a significant association with both empathic emotion and personal distress (EC, PD subscales). Demonstrating that the dispositional measure of emotional empathy was clearly related to affective reactions, while the dispositional measure of cognitive empathy was clearly unrelated, provided support for a multidimensional view of empathy as tapped by the IRI.
Another study by Davis (1983b) established the construct, convergent, and discriminant validity of the four IRI subscales using a sample of 677 male and 667 female undergraduate students. In order to assess the construct validity of a multidimensional view of empathy, the four subscales of the IRI as well as the Hogan Empathy Scale (Hogan, 1969), measuring cognitive empathy, and the Mehrabian and Epstein Emotional Empathy Scale (Mehrabian & Epstein, 1972), measuring emotional empathy, were administered to smaller samples of 225 males and 235 females within the larger pool of subjects. As predicted, the Hogan Empathy Scale (cognitive) was most highly correlated (mean for male and female $r = .40$) with the cognitive PT subscale while the FS and EC subscales were considerably less correlated (mean for male and female $r$'s of .15 and .18, respectively), and the PD subscale was both significantly and negatively associated (mean for male and female $r = -.33$). On the other hand, the PT subscale demonstrated the least association of the four IRI scales with the Mehrabian and Epstein measure of affective empathy (mean for male and female $r = .20$) while the FS and EC subscales displayed significantly greater associations (mean for male and female $r$'s of .52 and .60, respectively), and the PD scale exhibited a minimal association (mean for male and female $r = .24$). Aside from the irregularity of the PD correlations, the results generally support the multidimensional view of empathy comprised of both cognitive and affective components.

A second component of the experiment assessed the convergent and discriminant validity of the IRI by demonstrating how the specificity of each subscale relates to other potentially related psychological constructs. A sample of 225 males and 204 females from introductory psychology classes were administered the Wechsler Adult Intelligence Scale-Revised (WAIS; Wechsler, 1955), the Emotionality, Activity, Sociability, and Impulsivity Temperament Measure (EASI; Buss & Plomin, 1975), the Texas Social Behavior
Inventory (TSBI; Helmreich, Stapp, & Ervin, 1974), and the Self-Consciousness Scale (SCS; Scheier, Buss, & Buss, 1975). Through the use of detailed correlational analyses, the results indicated that the IRI exhibits predicted relationships with psychological indexes of social competence, self-esteem, emotionality, and sensitivity to others. Therefore, these results establish construct validity of a multidimensional view of empathy by providing evidence that the four qualities tapped by the IRI are separate constructs, each connected in precise and definitive ways with other psychological measures.

Replication of the factor structure of the IRI was confirmed in a study by Carey, Fox, & Spraggins (1988) in a randomized survey of 389 female clinical dietitians and dietetic interns with a mean age of 30.8 years. Principal components analysis disclosed four major factors with eigenvalues of 4.71, 3.58, 2.68 and 1.76. Additional factors displayed eigenvalues of 1.20, 1.11, 1.04, and .99. Accordingly, four factors were extracted and subjected to varimax rotation. Seven items had structure coefficients greater than .40 on each factor suggesting simple structure of four subscales measuring four discernibly different empathy dimensions. The demographic differences in this study indicate that the constructs measured by the IRI have generalizability beyond the original undergraduate samples used to develop the instrument.

Both the construct validity and the test-retest reliability of the IRI were investigated in a study by Davis & Franzoi (1991) which surveyed 250 high school students (103 males and 102 females) at one-year intervals for three successive years. Correlational results were quite similar to those found in previous studies with a substantial positive correlation between perspective taking and empathic concern (.46, p <.001) and a weaker, negative correlation between perspective taking and personal distress (.13, p <.06). Mean scores for empathy yielded the predicted increase of .58 (p <.01) for Year One - Year Two and .65 (p
<.01) for Year Two - Year Three which supports the developmental theory of change contained in the original construction of the IRI. The year-to-year continuity of these findings also upholds the concept of trait stability among adolescents, underlying the concurrent validity of the measure. Main effects for gender, F(4,201) = 14.70, P < .001, were consistent with previous reports by Davis (1980) which revealed higher scores for females on all four measures of empathy with the smallest significant difference on the PT subscale (mean difference across years 1.72 scale points).

Romer, Gruder, & Lizzadro (1986) investigated the construct and concurrent validity of the IRI by demonstrating its correlation with specific indicators on the Helping-Orientati on Questionnaire (HOQ; Ribal, 1983) designed to measure altruism. In a sample of 94 undergraduates, findings revealed the EC subscale and the Nurturance subscale (NS) were highly related (r = .53, p < 0.01) while the Succorance subscale (SS) (indicating a more selfish concern with the welfare of others) and the PD subscale were positively related (r = .42, p < 0.01). Scores on both the NS (F(1,88) = 4.05, p < 0.05) and SS (F(1,88) = 4.47, p < 0.05) scales were related to the FS subscale, while no reliable differences (.15) were evidenced for the PD subscale. Patterns of intercorrelations between the four subscales of the IRI were similar to original validation samples (Davis, 1980). Findings in this study are weakened by the lack of validity and reliability studies for the HOQ.

Convergent validity of the IRI was examined in a study (Wise & Cramer, 1988) correlating cognitive style, empathic traits, and other variables such as age, sex, grade, birth-order, and school-related achievement. Both the IRI and the Hogan Empathy Scale (HES) were administered to a sample of 840 (females, 441; males, 399 with a mean age - 13.2 years) seventh and eighth grade students. Positive correlations between the HES and the IRI were evidenced for the Fantasy (r = .20, p < 0.01), Empathic Concern (r = .19, p
<0.01, and Perspective-taking (r = .20, p < 0.01) subscales with a negative correlation for the Personal Distress subscale (r = -.09, p < 0.01). Principal components analysis yielded a four-factor structure congruent with previous findings for adult populations (Davis, 1983a; Davis, 1983b). Higher scores for females also confirmed previous research noting sex difference in measured empathy (Davis, Hull, Young, & Warren, 1987).

Cross-cultural reliability and validity studies of the IRI are glaringly absent from the psychological literature. However, an Israeli study (Yinon, Mayraz, & Fox, 1994) compared the false-consensus effect (FCE) with the Perspective-taking subscale of the IRI in four age groups: 1. older adolescents (females, 27; males, 22 with a mean age = 18), 2. young adults (females, 32; males, 28 with a mean age = 37), 3. older adults residing in old-age homes (females, 27; males, 22 with a mean age = 81), and 4. older student adults (females, 24; males, 23 with a mean age = 76). Utilizing the PT subscale as a measure of egocentrism, indicated that younger adults exhibited significantly more ability for perspective-taking than did the adolescents, t(97) = 2.1, p < .05 which supports the developmental nature of cognitive empathy. False-consensus scores, perspective-taking scores, as well as the general score on the IRI were close to zero suggesting that FCE derives from situational factors rather than from a stable personality disposition as measured by the IRI.

Although the IRI has been extensively used to examine empathy and relational competence (Davis & Oathout, 1987); affective reactions to dramatic film stimuli (Davis, 1987); empathy and burnout in rehabilitation counselors (Day & Chambers, 1991); and differentiation of personal distress and sympathy in children and adults (Eisenberg, Schaller, Fabes, Bustamante, Mathy, Shell, and Rhodes, 1988), it is unclear why replication of the factor structure of the IRI has not been more fully explored. To date, all reliability
and validity studies, with one exception (Carey, Fox, & Spraggins, 1988), have been undertaken by Davis (1980, 1983a, 1983b); Davis & Oathout, 1987; and Davis & Franzoi, 1991), giving rise to concerns regarding experimenter effects possibly confounding results. Without further investigations of the structural properties of the IRI in both clinical and nonclinical populations and across a broad range of demographic variables, both internal and external validity of the instrument remains somewhat limited.

Research Design

The design utilized for this study was the Randomized Experimental Posttest-Only Control Group Design (Kazdin, 1992) which includes three groups: the experimental group, the no-treatment control group, and the placebo support group. This design was selected because subject availability did not satisfy the subject to variable ratio requirements necessary to implement multivariate statistical analyses and because no alternative forms of the instruments were available to control for pretest-posttest sensitization. Although the use of a Pretest-Posttest Control Group Design is often the preferred method to evaluate behavioral change, a posttest-only design eliminates the effects of pretest sensitization as well as controlling for threats to internal validity such as history, maturation, and instrumentation by keeping these factors equivalent across all groups. The use of random selection and random assignment equalizes groups, thereby, reducing within-group variability while allowing the researcher to make specific hypotheses about change. These safeguards augment the sensitivity of the statistical analyses which further increases the generalizability of the results (Kazdin, 1992).

Statistical Analyses

Preliminary analyses generating descriptive statistics such as means and standard deviations were computed to determine whether the sample fulfills normalcy requirements.
Pearson correlation coefficients were calculated to describe the strength of the linear relationship between the dependent measures (SITA and IRI) as well as to describe the strength of the linear relationship between the independent measures (Care scale and Overprotection scale of the PBI).

A multivariate analysis of covariance (MANCOVA) was computed to determine if there is a significant relationship between scores on the SITA and the scores on the IRI and the two covariates - scores on the Care scales and scores on the Overprotection scale of the PBI. Since the multivariate test for homogeneity was not significant, univariate F-tests were computed for each of the dependent variables to determine main effects. A regression analysis determined whether positive and negative attachment experiences predicted the development of resilient qualities.
CHAPTER 4

Results

This chapter includes a presentation of descriptive statistics, an explanation of reliability of subscales, and an analysis of the main hypotheses.

Description of Sample

The final sample consisted of 82 female subjects. Subjects ranged in age from 16 to 18 years, with a mean age of 16.68. The ethnic breakdown included 91% Caucasian (n=74), 5% African American (n=4), 2% Indian (n=2), and 2% Hispanic (n=2). All subjects were selected from a class list of female students in grades 9 through 12 who attended a middle class public high school in suburban New Jersey.

Separate demographic information is presented in Table 1 and Table 2. Table 1 presents the frequencies in each of the three treatment conditions, by grade. The largest percentage of subjects (55%) were in the 11th grade. Table 2 exhibits frequencies for family status. Subjects from intact families (65.7%) were more highly represented than subjects from either single parent families (24.1%), step-parent families (10.8%), or single parent and step-parent families combined (34.9%).

Reliability of Subscales

Table 3 presents Cronbach’s Alpha reliability coefficients of the Care and Overprotection subscales of the PBI, the Fantasy, Empathic Concern, Perspective Taking, and Personal Distress Subscales of the IRI, and the Healthy Separation subscale of the SITA. The reliability coefficients for all the subscales, with the exception of the Healthy Separation subscale, ranged from .69 to .92, indicating high internal consistency. On the Healthy Separation subscale, however, the internal consistency reliability (.45) was less than optimally reliable.
Table 1

<table>
<thead>
<tr>
<th>Grade</th>
<th>Training Frequency</th>
<th>Training Percent</th>
<th>Support Frequency</th>
<th>Support Percent</th>
<th>Control Frequency</th>
<th>Control Percent</th>
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<td>7.3</td>
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<td>6.0</td>
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<td>15</td>
<td>18.2</td>
<td>18</td>
<td>21.9</td>
<td>13</td>
<td>15.8</td>
</tr>
<tr>
<td>12</td>
<td>7</td>
<td>8.5</td>
<td>4</td>
<td>4.8</td>
<td>9</td>
<td>10.9</td>
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</tbody>
</table>
Table 2

Family Status for Each Treatment Condition

<table>
<thead>
<tr>
<th>Family</th>
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<th>Support</th>
<th></th>
<th>Control</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
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<td>Intact</td>
<td>18</td>
<td>21.9</td>
<td>18</td>
<td>21.9</td>
<td>18</td>
<td>21.9</td>
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<td>Single Parent</td>
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<td>9.5</td>
<td>6</td>
<td>7.3</td>
<td>6</td>
<td>7.3</td>
</tr>
<tr>
<td>Step-Parent</td>
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<td>3.6</td>
<td>3</td>
<td>3.6</td>
<td>3</td>
<td>3.6</td>
</tr>
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</table>
Table 3

Cronbach's Alpha Reliabilities for Each Subscale

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Number of Items</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBI Care</td>
<td>12</td>
<td>.92</td>
</tr>
<tr>
<td>PBI Overprotection</td>
<td>13</td>
<td>.88</td>
</tr>
<tr>
<td>IRI Fantasy</td>
<td>6</td>
<td>.77</td>
</tr>
<tr>
<td>IRI Empathic Concern</td>
<td>7</td>
<td>.77</td>
</tr>
<tr>
<td>IRI Perspective Taking</td>
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<td>.73</td>
</tr>
<tr>
<td>IRI Personal Distress</td>
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<td>.69</td>
</tr>
<tr>
<td>SITA Healthy Separation</td>
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<td>.45</td>
</tr>
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</table>
Analysis of Hypotheses

Hypothesis 1 stated that subjects who receive treatment will have significantly higher scores on the empathy measure (IRI) than subjects who receive no treatment, or subjects who receive a placebo (support) treatment. This hypothesis was not supported by the data. Table 4 presents means, standard deviations, (SD), and sample sizes (N) of four levels of empathy (Perspective Taking), Fantasy, Empathic Concern, and Personal Distress as measured by the IRI) for Training, Support, and Control groups. The mean scores on the IRI Fantasy, Empathic Concern, and Personal Distress subscales are similar for the Training, Support, and Control groups. However, the mean scores on the Perspective Taking subscale were similar for the Support group and the Control group, whereas scores for the Training group differed.

Hypothesis 2 stated that subjects who receive treatment will have a significantly higher score on the Healthy Separation subscale of the separation-individuation measure (SITA) than subjects who received no treatment or subjects who received a placebo (support) treatment. This hypothesis was not supported by the data. Table 4 shows that mean scores on the Healthy Separation subscale were very similar for each of the three treatment groups.

A multivariate analysis of variance (MANOVA) was used to examine the effects of attachment (Care and Overprotection) and three treatment interventions (Training, Support, and No-Treatment Control) on four levels of empathy (as measured by the Fantasy, Empathic Concern, Perspective Taking, and Personal Distress subscales of the IRI) and separation-individuation (as measured by the Healthy Separation subscale of the SITA). The Box’s M yielded a nonsignificant F (F=1.1, df=19,730, p=.37) which indicates that the assumption of homogeneity of variance was not violated.
<table>
<thead>
<tr>
<th>Subscale</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
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<td>SITA</td>
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<td>4.1</td>
<td>28</td>
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<tr>
<td></td>
<td>Support</td>
<td>15.5</td>
<td>3.1</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>14.7</td>
<td>3.7</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>15.2</td>
<td>3.7</td>
<td>82</td>
</tr>
<tr>
<td>IRI Perspective Taking</td>
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<td>28</td>
</tr>
<tr>
<td></td>
<td>Support</td>
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<td>27</td>
</tr>
<tr>
<td></td>
<td>Control</td>
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<td>4.0</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>16.9</td>
<td>4.8</td>
<td>82</td>
</tr>
<tr>
<td>IRI Fantasy</td>
<td>Training</td>
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<td>4.6</td>
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<tr>
<td></td>
<td>Support</td>
<td>17.4</td>
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<td>27</td>
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<tr>
<td></td>
<td>Control</td>
<td>17.5</td>
<td>6.7</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>17.2</td>
<td>6.1</td>
<td>82</td>
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<tr>
<td>IRI Empathic Concern</td>
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<td>4.6</td>
<td>27</td>
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<tr>
<td></td>
<td>Control</td>
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<td>4.3</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>20.3</td>
<td>4.8</td>
<td>82</td>
</tr>
<tr>
<td>IRI Personal Distress</td>
<td>Training</td>
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<td>4.2</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Support</td>
<td>11.5</td>
<td>3.7</td>
<td>27</td>
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<td></td>
<td>Control</td>
<td>13.2</td>
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<tr>
<td></td>
<td>Total</td>
<td>12.1</td>
<td>4.7</td>
<td>82</td>
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</tbody>
</table>
Hypotheses 3 and 4 examined the relationship between the two dependent variables, empathy and separation-individuation, and the two covariates, Care and Overprotection. Specifically, hypothesis 3 stated that a significant relationship exists between high Care scores (positive attachment as measured by the PBI) and high scores on empathy (as measured by the Perspective Taking, Fantasy, Empathic concern, and Personal Distress subscales of the IRI) and high scores on separation-individuation (as measured by the Healthy Separation subscale of the SITA). Hypothesis 4 stated that a significant relationship exists between high Overprotection scores (negative attachment as measured by the PBI) and low scores on empathy (as measured by the Perspective Taking, Fantasy, Empathic concern, and Personal Distress subscales of the IRI) and low scores on separation-individuation (as measured by the Healthy Separation subscale of the SITA).

Hypothesis 3 was supported by the data, while hypothesis 4 was not. Table 5 presents multivariate statistics for the Care and Overprotection covariates, as well as the main effect of group. Results indicated that positive attachment, as measured by the PBI Care subscale, is significantly related to empathy and healthy separation (Table 5). However, negative attachment, as measured by the PBI Overprotection subscale, was not significantly related to empathy and healthy separation (Table 5). Within this sample, positive attachment (Care) was a significant predictor of empathy and healthy separation. Negative attachment (Overprotection), on the other hand, was unrelated to empathy and healthy separation.

After controlling for the effect of the PBI, the effect of treatment (group) was nonsignificant (Table 5). Thus, hypotheses 1 and 2 were not supported by the data, indicating that the three treatment interventions – Training, Support, and No-Treatment – had no significant effect on levels of empathy and separation-individuation.
### Table 5

**Multivariate Tests**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Pillai’s Trace</th>
<th>Value</th>
<th>F</th>
<th>Hypothesis df</th>
<th>Error</th>
<th>Sig.</th>
<th>Eta Squared</th>
<th>Observed Power</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.16</td>
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<td>73.00</td>
<td>.08</td>
<td>.16</td>
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<tr>
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<td>.80</td>
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<tr>
<td>Roy’s Largest Root</td>
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<td>5.00</td>
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<td>.16</td>
<td>.80</td>
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<table>
<thead>
<tr>
<th>Effect</th>
<th>Pillai’s Trace</th>
<th>Value</th>
<th>F</th>
<th>Hypothesis df</th>
<th>Error</th>
<th>Sig.</th>
<th>Eta Squared</th>
<th>Observed Power</th>
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<tr>
<td>PBIOVER</td>
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<td>.23</td>
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<td>Wilks’ Lambda</td>
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<td>.67</td>
<td>5.00</td>
<td>73.00</td>
<td>.65</td>
<td>.04</td>
<td>.23</td>
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<tr>
<td>Hotelling’s Trace</td>
<td></td>
<td>.05</td>
<td>.67</td>
<td>5.00</td>
<td>73.00</td>
<td>.65</td>
<td>.04</td>
<td>.23</td>
</tr>
<tr>
<td>Roy’s Largest Root</td>
<td></td>
<td>.19</td>
<td>.67</td>
<td>5.00</td>
<td>73.00</td>
<td>.65</td>
<td>.04</td>
<td>.23</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Effect</th>
<th>Pillai’s Trace</th>
<th>Value</th>
<th>F</th>
<th>Hypothesis df</th>
<th>Error</th>
<th>Sig.</th>
<th>Eta Squared</th>
<th>Observed Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUP</td>
<td></td>
<td>.18</td>
<td>1.48</td>
<td>10.00</td>
<td>148.00</td>
<td>.15</td>
<td>.09</td>
<td>.72</td>
</tr>
<tr>
<td>Wilks’ Lambda</td>
<td></td>
<td>.83</td>
<td>1.48</td>
<td>10.00</td>
<td>146.00</td>
<td>.15</td>
<td>.09</td>
<td>.72</td>
</tr>
<tr>
<td>Hotelling’s Trace</td>
<td></td>
<td>.21</td>
<td>1.47</td>
<td>10.00</td>
<td>144.00</td>
<td>.16</td>
<td>.09</td>
<td>.72</td>
</tr>
<tr>
<td>Roy’s Largest Root</td>
<td></td>
<td>.15</td>
<td>2.28</td>
<td>10.00</td>
<td>74.00</td>
<td>.06</td>
<td>.18</td>
<td>.71</td>
</tr>
</tbody>
</table>
Table 6 displays Levene's Test of Equality of Error Variances which is a univariate test of the null hypothesis that the error variance of the dependent variable is equal across groups. Rather than considering the dependent variables concurrently, this test evaluates the variance for each subscale in isolation. The nonsignificant F statistic for the SITA (F=1.02, p=.37), IRI Perspective Taking (F=2.23, p=.11), IRI Fantasy (F=2.55, p=.09), IRI Empathic Concern (F=1.4, p=.24), and IRI Personal Distress (F=2.90, p=.06) supports the assumption that equal variances for each of the subscales has not been violated.

Univariate F-tests of between-subjects effects are presented in Table 7. These tests served to determine whether between groups differences exist on four levels of empathy (as measured by the Perspective Taking, Fantasy, Empathic Concern, and Personal Distress subscales of the IRI) and one level of separation-individuation (as measured by the Healthy Separation subscale of the SITA). Subjects in the Training, Support, and No-Treatment Control groups did not differ significantly on Healthy Separation, Fantasy, Empathic Concern, and Personal Distress. However, subjects differed on the Perspective Taking subscale of the IRI, indicating that positive attachment may have an impact on one level of empathy (Table 8).

Post hoc tests were conducted to determine which treatment condition - Training, Support, or No-Treatment Control - had a significant effect on scores of subjects on IRI Perspective Taking. The Bonferroni Test of Inequality was used to control for spurious results which could result from multiple post hoc tests. Table 9 shows that there was a significant difference on IRI Perspective Taking between the Training and the Support groups. Somewhat surprising, however, are higher scores for the Support group on the IRI Perspective Taking subscale than for the training group.
Table 6

**Levene's Test of Equality of Error Variances**

<table>
<thead>
<tr>
<th>Subscale</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>SITA</td>
<td>1.02</td>
<td>2</td>
<td>79</td>
<td>.37</td>
</tr>
<tr>
<td>IRI Perspective Taking</td>
<td>2.23</td>
<td>2</td>
<td>79</td>
<td>.11</td>
</tr>
<tr>
<td>IRI Fantasy</td>
<td>2.55</td>
<td>2</td>
<td>79</td>
<td>.09</td>
</tr>
<tr>
<td>IRI Empathic Concern</td>
<td>1.44</td>
<td>2</td>
<td>79</td>
<td>.24</td>
</tr>
<tr>
<td>IRI Personal Distress</td>
<td>2.90</td>
<td>2</td>
<td>79</td>
<td>.06</td>
</tr>
</tbody>
</table>
Table 7

Univariate F Tests of Between-Subjects Effects

<table>
<thead>
<tr>
<th>Source</th>
<th>Dependent Variable</th>
<th>Type III Sum Of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Eta Squared</th>
<th>Observed Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUP</td>
<td>SITA</td>
<td>10.56</td>
<td>2</td>
<td>5.28</td>
<td>.39</td>
<td>.68</td>
<td>.01</td>
<td>.11</td>
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<tr>
<td></td>
<td>IRI Perspective Taking</td>
<td>169.68</td>
<td>2</td>
<td>84.84</td>
<td>4.22</td>
<td>.02</td>
<td>.10</td>
<td>.72</td>
</tr>
<tr>
<td></td>
<td>IRI Fantasy</td>
<td>6.24</td>
<td>2</td>
<td>3.12</td>
<td>.08</td>
<td>.92</td>
<td>.002</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>IRI Empathic Concern</td>
<td>89.48</td>
<td>2</td>
<td>44.74</td>
<td>2.22</td>
<td>.12</td>
<td>.05</td>
<td>.44</td>
</tr>
<tr>
<td></td>
<td>IRI Personal Distress</td>
<td>49.85</td>
<td>2</td>
<td>24.93</td>
<td>1.13</td>
<td>.33</td>
<td>.03</td>
<td>.24</td>
</tr>
<tr>
<td>ERROR</td>
<td>SITA</td>
<td>1041.65</td>
<td>77</td>
<td>13.53</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>IRI Perspective Taking</td>
<td>1547.38</td>
<td>77</td>
<td>20.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IRI Fantasy</td>
<td>2919.17</td>
<td>77</td>
<td>37.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IRI Empathic Concern</td>
<td>1553.71</td>
<td>77</td>
<td>20.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IRI Personal Distress</td>
<td>1706.22</td>
<td>77</td>
<td>22.16</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Table 8

**Univariate F Tests for IRI Perspective Taking**

<table>
<thead>
<tr>
<th>IRI Perspective Taking</th>
<th>SS</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>220.02</td>
<td>2</td>
<td>110.01</td>
<td>5.25</td>
<td>.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1656.67</td>
<td>79</td>
<td>20.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1876.70</td>
<td>81</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 9

**Bonferroni Post Hoc Comparison on IRI Perspective Taking**

<table>
<thead>
<tr>
<th>(I) GROUP</th>
<th>(J) GROUP</th>
<th>Difference</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training Group</td>
<td>Support Group</td>
<td>-3.9974</td>
<td>1.235</td>
<td>.005</td>
<td>-7.0186</td>
<td>-0.9761</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>-2.1085</td>
<td>1.235</td>
<td>.275</td>
<td>-5.1297</td>
<td>0.9128</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>1.8889</td>
<td>1.246</td>
<td>.401</td>
<td>-1.1597</td>
<td>4.9375</td>
</tr>
</tbody>
</table>

- The mean difference is significant at the .05 level.
CHAPTER 5

Conclusions and Recommendations

This chapter reviews the research objectives presented in this study and elaborates on the statistical results. Each psychological variable is examined with respect to attachment and to training, addressing both significant and nonsignificant findings in terms of their meaningfulness to the development of resilient capacities. In addition to examining findings with respect to the objectives originally set forth, supplementary information gathered during the course of this study is discussed. Limitations of the present study are reviewed, both in terms of their possible impact on the results of the study and in terms of the need for improvement for supplementary research in this area. Finally, implications for future research are discussed.

Putting Results Into Perspective

The purpose of this study was to begin to address the paucity of research on specific training methods to foster resilient qualities as well as to explore the relationship between attachment experiences and the development of stress-resistant capacities. Since the majority of the current literature tends to merely identify resilient characteristics within a population of children of latency age or younger from low socioeconomic groups in urban environments (Cowen, et al., 1990; Barbarin, 1993; Radke-Yarrow & Brown, 1993), the need to explore methods to develop resilient capacities in both a gender-related and multicultural context was strikingly apparent. Furthermore, although positive nurturing experiences have been cited as fundamental for the development of empathy and autonomy, little is known about how to cultivate these capacities in a population of
adolescent females (Masten, 1989; Werner, 1992; Egeland, et al., 1993; Rutter, 1993; Brooks, 1994). The psychological variables selected for study (attachment, stress-inoculation, assertiveness, and empathy training, and empathy and healthy separation) were chosen based on the literature investigating the characteristics of resiliency, the prerequisites necessary to foster adaptive functioning, and the possibility of utilizing preventive interventions to develop stress-resistant capacities. It was expected that this study would establish a concrete relationship between positive attachment experiences and resilient capacities, as well as offering a definitive methodology for developing these capacities in a population of adolescent females. Specific hypotheses for the study with respect to the results will be examined below.

Discussion of Results

The following discussion will address each of the variables under consideration, review the statistical findings, and examine factors that impacted the results.

Attachment

In order to determine how the quality of attachment experiences affects adaptive functioning, this study sought explore the relationship between Care and Overprotection and the presence of two resilient capacities - empathy and healthy separation. The hypothesis which stated that there is a significant relationship between positive attachment (as measured by high Care scores), empathy, and healthy separation was significant. These findings were consistent with prior research on resiliency which establishes positive attachment experiences as the predominant factor influencing one's capacity to develop stress-resistant capacities (Brooks, 1994; Rutter, 1983; Egeland, et al., 1994).

Once the relationship between positive attachment and resilient qualities was established, it was possible to examine the effects of positive attachment on empathy and
autonomy in each of the three treatment conditions. Subjects in the Training, Support, and No-Treatment Control groups did not differ significantly on the Healthy Separation measure of separation-individuation or on the Fantasy, Empathic Concern, and Personal Distress subscales of the empathy measure in each of the three treatment groups.

However, positive attachment had a significant effect on the Perspective Taking dimension of the empathy scale in all three groups. As indicated in prior research studies (McDevitt, et al., 1991; Eisenberg & McNally, 1993; Koestner, Franz, & Weinberger 1990; Fabes, Eisenberg, & Miller, 1990), warm and empathic parenting styles facilitated emotional responsiveness in children, particularly in the areas of empathic concern and perspective taking.

The hypothesis which proposed that there is a significant relationship between negative attachment (as measured by high Overprotection scores) and low levels of empathy and healthy separation was not significant. These results are somewhat misleading in that none of the subjects received high scores on the Overprotection dimension of the attachment measure, making it difficult to determine what effect, if any, negative attachment had on degrees of empathy and healthy separation. Furthermore, based on the lack of data collected on the Overprotection dimension of attachment, it was impossible to compare how positive and negative attachment experiences might affect one’s ability to utilize training to develop resilient qualities.

It was interesting to note that, despite the higher percentage of subjects from intact families (65.7%) than from single parent and step-parent families (34.9% combined), all subjects reported high levels of Care. This finding supports prior research on attachment which suggests that the presence of one supportive and consistent caregiving relationship
(i.e. single-parent, grandparent, mentor) can promote adaptive functioning, regardless of
the structure or level of stability in the family unit (Joffe & Vaughn, 1994).

Effects of Stress-inoculation, Assertiveness, and Empathy Training on
Empathy and Healthy Separation

In order to focus on preventive applications, this study sought to develop and to implement a training package that would foster resilient capacities that, in turn, might minimize the risk for psychopathology. After partialling out the effects of positive attachment, there were no differences among the Training, Support, and No-Treatment Control groups on measures of empathy and healthy separation. Thus, the hypothesis which proposed that those subjects who received stress-inoculation, assertiveness, and empathy training would score higher on measures of empathy and healthy separation was not significant.

Results of Training on Empathy

Post-treatment assessment revealed that the only difference among the three groups was a significant increase on the Perspective-taking dimension of the empathy measure in the Support group. Essentially, the Fantasy subscale which indicates a tendency to identify with fictitious characters in books, movies, etc. was irrelevant to the variables under consideration in this study. Both the Empathic Concern and Personal Distress subscales of the IRI measure emotional reactivity, the affective dimension of empathy, and were unaffected by training. Considering the developmental nature of empathy, it is not surprising that personal distress, a more primitive, physiologically based form of empathic identification usually associated with younger children, was not elicited by any of the treatment interventions. Empathic concern, also experiential but involving a greater degree of cognitive awareness than personal distress, may require a more intimate, long-term
group process than was permitted by the use of a time-limited treatment package.

Therefore, it is reasonable to conclude that the ability to take another person's perspective was better facilitated by the interactive nature of the Support group while the structure of the automated interventions utilized in the Training group may have inhibited these responses.

**Results of Training on Healthy Separation**

After taking into account the added benefits to heightened personal empowerment and self-esteem that would seem to be the logical outgrowth of greater self-regulation (Brooks, 1994; Kiselica, et al., 1994; Stake, et al., 1983), it is unclear why the training intervention had no effect on healthy separation. Of course, it is easy to assume that the failure to evidence increased levels of autonomy was a consequence of a less than adequate level of reliability on the Healthy Separation subscale. However, because healthy separation appears to be a phenomena that evolves over time, is the result of a combination of factors, and is less affected by isolated experiences than by a composite series of events, longitudinal studies may be the more appropriate method for evaluating changes in this construct. Yet, on the other hand, one's ability to internalize this type of experience, however brief, may be a true indicator of autonomy and resilient adaptation. As Rutter stated, one's ability to extract and to utilize what is needed from the environment may be the true mark of the resilient personality (Rutter, 1994).

**Confounding Variables Impacting Results**

After reviewing the limitations presented in Chapter One, the influence of environmental variables such as group size, time of day, length of session, and subjects' fatigue emerged as the most influential factors affecting both the Training and Support groups. Although this researcher made efforts to address these variables methodologically,
the organizational constraints imposed by the school district precluded a satisfactory resolution.

Possibly the most significant factor that interfered with the efficacy of the interventions was the large number of subjects in each group. Despite prior research indicating immediate and long-term effects of empathy training using a large group format (Kremer & Dietzen, 1991), this researcher attempted to divide the Training and Support groups into four subgroups of approximately 13 subjects each, meeting on alternate days. However, due to personal time conflicts, the facilitator was unable to manage a daily after-school time commitment. Ideally, in order to establish a therapeutic framework, group size should range from eight to ten subjects rather than 25 to 27 members, as were included in the present groups. Because individual participation and interactive communication were inherently more restricted, group cohesion required a longer time to evolve and may, in fact, never been adequately established to achieve the level of security and trust necessary for honest self-disclosure. Even the facilitator found the group size somewhat overwhelming and often had difficulty maintaining structure and focus. In fact, she reported that, at times, particularly in the Training group, subjects often had a specific agenda and would try to override what was being presented in order to address personal topics. Consequently, issues of transference and countertransference could certainly account for problems with group cohesion and, ultimately, efficacy of training.

In addition, group process was further impacted by the short duration of each training session. Due to academic and time constraints, sessions for both the training and placebo groups were scheduled during a supplementary ninth period at the end of the formal school day. In reality, this period extended for 35 minutes rather than the regular 43 minute class period and, at times, overlapped with extracurricular activities such as sports,
clubs, and tutorials. When these conflicts occurred, subjects left early or arrived late, causing not only a temporary disruption in group process but an interference in the continuity of training as well. Moreover, subjects were sometimes pressured and distracted by their other commitments, resulting in problems with inconsistent attendance and difficulties maintaining optimal focus. According to the facilitator's reports, the subjects felt frustrated by the time constraints rather than fulfilled by the interventions which, ironically, may have further heightened their stress rather than reducing it.

Despite school officials endorsing this study, promising benefits of developing improved coping mechanisms, and offering one-half credit of community service as a reward for participation, subjects did not appear to regard their involvement as seriously as was anticipated. At this point, it is unclear whether subjects were tired, bored, over-committed, or lacked the maturity to understand the value of training as it related to their everyday lives. Surely, fatigue may have greatly impacted the subjects’ capacity for sustained attention which, in turn, affected both their motivation and their ability to absorb new material. As determined in prior studies, scheduling training sessions within the parameters of the school day, rather than as an after-school activity had a positive effect on improved levels of empathy (Hatcher, et al., 1994), relaxation, and assertiveness (Waksman, 1984a; Waksman, 1984b; and Rotheram & Armstrong, 1980). It appears that incorporating the interventions into the academic curriculum would not only control for distractibility and fatigue, but legitimize the training process and create a greater sense of commitment among the subjects.

Discussion of Limitations of Each Training Intervention

A significant frustration for subjects in the experimental group was the rigidity of the structure imposed by the automated interventions. Although each of the interventions
elicited personal reflections, subjects were precluded from exploring or sharing their own experiences due to the parameters of the defined agenda as well as because of prescribed time constraints. Rather than being active participants, the subjects saw themselves as passive recipients who were merely being "spoon-fed" information. When asked for specific comments about how to improve the interventions, subjects verbalized a desire to be involved with designing the interventions, wanted more opportunities to introduce their own topics, and expressed an interest in the use of role play as a way to develop and experience new skills.

Although the subjects offered several valid comments about the interventions, many of them tended to consider only the negative aspects of training rather than focusing on the positive benefits as well. In general, many of the subjects were irritable, impatient, and over-stressed. It may be that even under the most optimum conditions, this sample of adolescent females might have had some difficulties utilizing the interventions to their best advantage.

**Stress-inoculation Training**

There was little feedback given by the subjects on the stress-inoculation training component other than the facilitator's report that they did not follow through with the daily at-home practice exercises. Here again, the complexity of the subjects' other commitments may have interfered with their giving adequate attention to the requirements of training. In general, the facilitator observed that subjects expected immediate gratification and lacked the foresight to recognize that their consistent commitment might result in an improvement in their overall functioning. It appears that they did not understand how even a minimal amount of time spent completing the recommended procedures could have a long-term effect on modifying stress. Furthermore, the facilitator reported that the subjects tended to
be self-centered and lacked the insight necessary to make mature choices about how to organize their time.

Assertiveness Training

In particular, subjects stated that some of the assertiveness interventions were trivial and irrelevant to current age concerns. Although this researcher attempted to update the relevancy of the situations, subjects’ complaints may be valid in light of the challenging and complex lifestyles that confront contemporary adolescents. In retrospect, it may have been more beneficial to poll subjects prior to designing the interventions to determine what types of situations created the greatest difficulty with self-assertion. As McNeilly and Yorke (1990) concluded in their study on social skills training with adolescents, setting specificity and personal selection of problem behaviors can augment the effectiveness of assertion training. It stands to reason that female adolescents who are independent and managing complex life styles could make valuable contributions regarding areas in which they had difficulty effectively expressing their needs as well as establishing specific goals for what they hoped to achieve.

Empathy Training

Lack of relevancy could also have impacted the efficacy of the empathy interventions. Despite the selection of videotape models who were of the same age and same gender, as was recommended in prior research (Feshbach, 1978), the subjects had difficulty identifying with the emotional content of the stimulus situations. Here again, as recommended by Kipper and Ben-Ely (1979), subjects’ selection of pertinent situations can have a significant effect on eliciting empathic responses. The automated feedback focused more on the cognitive rather than the affective component of empathy and, in turn, may have discouraged emotional reactivity. Even though the subjects’ preference for an in vivo
intervention, such as role play, would have provided the framework for emotional expression, they still may have been resistant to revealing a range of emotions with their peers in what was described as a less than secure environment.

Although all of the above factors had an impact on the efficacy of the treatment package, perhaps the most problematic aspect of this study was the number of different interventions incorporated into the 10-week time frame. While the interventions were designed to mirror a hierarchical developmental model, they may have lacked some degree of continuity, making it difficult for subjects to create an expanding repertoire of coping strategies. Instead, before they had the opportunity to master a new skill, subjects were presented with another, seemingly unrelated, series of interventions. A better approach would be to educate subjects about the relationship among the different strategies to help them understand the developmental framework underlying the interventions, thereby, reinforcing their commitment to consistent attendance and practice. Ideally, if the interventions were incorporated into the school curriculum, they could extend over a 15 to 18 week period which would allow a minimum of five to six weeks to internalize each level of stress-reduction. The best solution might be to consolidate the three interventions into daily meetings extending over a three-week period. This type of structure would not only allow for continuity and positive reinforcement of previously learned skills, but provide the opportunity for follow-up evaluations, as well. Perhaps, most importantly, this design is in keeping with the short-term model most frequently endorsed by practitioners in today's therapeutic community.

Limitations of the Study

One of the primary factors in determining the validity of a research study is the reliability of the measures utilized to evaluate the effects of specific interventions on
behavioral changes. In the first place, since the IRI has not been normed on a population of adolescents, in particular adolescent females, it is impossible to generalize present findings on this measure to other population groups. Additionally, the less than optimal reliability of the Healthy Separation subscale of the SITA may have also limited the generalizability of results. As McClanahan and Holmbeck (1992) noted, since the Healthy-Separation subscale seems to tap both a healthy need for closeness and a healthy need for distance, two separate scales may be required to evaluate this dimension of separation-individuation. In addition, despite previous studies that investigated the effects of brief interventions on levels of autonomy, separation-individuation may not have been an appropriate variable to study in the context of short-term treatment applications. As discussed earlier, this construct is one that evolves and is not a personality trait that readily responds to behavioral modification. For example, a more suitable choice of variables could have been self-efficacy, self-esteem, or locus of control that are somewhat less abstract and multidimensional. Perhaps since the nature of these constructs has been extensively investigated in the literature, can be regarded as more definable and, as a result, measured with greater accuracy, their inclusion in future studies would significantly contribute to a more in depth understanding of adolescent development.

Selection of a posttest design was based on the determination that a sufficiently large sample was unavailable to justify the number of variables necessary to utilize a pretest-posttest design. Though sensitization of pretest on posttest is one of the limitations of this design, it is possible that by comparing subjects' responses prior to implementation of the interventions, effects of training may have been more evident on the empathy and separation-individuation measures.
Although the sample was adequately large to justify the number of variables and adhered to the principles of randomization, it is possible that the methodology employed to encourage participation may have biased the selection process. In other words, out of the 168 original telephone contacts to parents, the 124 females who initially agreed to participate in the study may have been highly motivated, independently functioning adolescents who were unrepresentative of an adolescent population in general. Combining this factor with a sample composed of subjects from predominantly white, middle class families definitely limits the generalizability of results to a multicultural population of adolescent females. Moreover, in future studies, other variables such as socioeconomic status, level of cognitive functioning, and history of psychotherapy may have to be controlled in order to accurately assess the main effects of training on the development of resilient qualities.

As noted previously, time of day and length of the weekly sessions were certainly environmental factors that affected the outcome of the interventions. Considering the shortcomings expressed by the subjects in the experimental group, it is reasonable to assume that boredom, irritability, and/or fatigue may have been factors that confounded the possibility of significant results. In addition, it is unclear how the automated interventions and the subjects’ behavior may have influenced the facilitator’s interactions with the groups. The facilitator reported that she was also frustrated by the time limitations, the lack of consistent attendance, and the restrictions imposed by a rigidly organized structure. It is certainly conceivable that not only her commitment to as well as her level of emotional involvement with the experimental group was less than with the support group. This factor, in turn, may have further impacted the development of group cohesiveness which is a fundamental prerequisite for the successful internalization of any psychotherapeutic
intervention. If, in fact, perspective taking is related to attachment to a supportive and nurturing caregiver as has been stated in the literature, then it may be reasonable to conclude that this dynamic had a significant effect on the results in both the experimental and support groups.

Implications for Future Research

Clearly, there is a dire need for more research in the area of resilience in general. The danger in not exploring methods to develop stress-resistant capacities can create a throwback to models of psychological functioning that focused on pathology rather than healthy adaptation. Certainly there are advantages to the individual in developing preventive strategies but, in many ways, the societal ramifications are far more profound. As noted in this study, many of today's adolescents are confronted with multiple stressors that compromise their functioning, in particular, high-risk urban teen-agers, especially those from minority backgrounds, who are victims of poverty, abuse, and neglect. Granted, there is no simple solution that can adequately resolve these horrific experiences but if safeguards were established through community organizations that offered early intervention in a secure environment, then it is possible that adaptive coping strategies could be nurtured more effectively. Clearly, the more that is understood about the nature of resilience, the greater the opportunity to develop appropriate interventions that foster stress-resistant capacities.

Even though this study utilized training interventions that in prior research have resulted in significant main effects for the variables under investigation, it is important that future studies evaluate the efficacy of automated interventions, consider their relevancy to sample demographics, and outline individual rather than generalized goals. Until researchers refine an appropriate methodology to augment specific stress-resistant
characteristics, the possibility of implementing a training package to promote an overall improvement in levels of resilient adaptation will remain unclear.

To date, some research has begun on the creation of a resiliency scale that measures the components of this construct, determines areas of strengths and weaknesses, and assists in the formulation of specific interventions that empower individuals to address their deficits (Henderson, Bernard, & Sharp-Light, 1998). Administering this scale to a large population which includes subjects from a diversity of ethnic backgrounds, socioeconomic statuses, and family compositions may aid in establishing a baseline of adaptive functioning that could then serve as a foundation from which to develop a common treatment package that could be easily implemented in a variety of different environments, such as schools, hospitals, and counseling centers. This methodology will supply more data on resiliency and, in turn, contribute to the development of improved preventive strategies.

Expanding the population parameters to include adolescent males will provide opportunities to compare how differences in gender-related perceptions of attachment experiences contribute to the development of adaptive functioning. According to the literature (Gilligan, 1982; Brown & Gilligan, 1992), because males and females have been socialized differently, their susceptibility to stress and individualized coping styles may be more a function of prescribed roles than a result of fundamental gender differences. For example, males tend to cope through a proactive approach, while females seem to be more reflective and utilize coping skills that favor interpersonal relationships. Gender-related studies will determine whether the characteristics of resiliency are defined differently for males and females as well as explore whether interventions specifically designed to conform to societal norms are effective at reducing stress and promoting an increase in adaptive functioning.
Although this study set out to explore resiliency in adolescent females, there are still many questions and challenges for future research. Can a person become resilient at age 20, 30, 40, or 50? If the fundamental prerequisites of positive attachment are not present, can an individual be resilient in spite of these limitations? Does the creation of resilient capacities mirror a developmental progression? Which aspects of resiliency are compromised by the effects of Overprotection? What effect does cognitive, behavioral, and psychodynamic psychotherapy have on the development of resilient qualities? Can relatively simple interventions such as peer counseling and mentoring relationships foster resiliency? Clearly, a heightened awareness of the stressors that confront contemporary adolescents and the ramifications of ignoring or minimizing their existence, has created a need to focus on preventive interventions that is more urgent than ever before. Hopefully, with a commitment to ongoing research, psychologists will demystify the concept of resilience and discover that it is a capacity all human beings possess.
References


Appendix A
# PARENTAL BONDING INSTRUMENT

*Female/male parent form:*

This questionnaire lists various attitudes and behaviors of parents. As you remember your Mother/Father during your first 16 years, would you place a tick in the most appropriate brackets next to each question.

<table>
<thead>
<tr>
<th>Question</th>
<th>Very like</th>
<th>Moderately like</th>
<th>Moderately unlike</th>
<th>Very unlike</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Spoke to me with a warm and friendly voice</td>
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<tr>
<td>2. Did not help me as much as I needed</td>
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<tr>
<td>3. Let me do those things I liked doing</td>
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<td>4. Seemed emotionally cold to me</td>
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<td>5. Appeared to understand my problems and worries</td>
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<td>6. Was affectionate to me</td>
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<td>7. Liked me to make my own decisions</td>
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<td>8. Did not want me to grow up</td>
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<tr>
<td>9. Tried to control everything I did</td>
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<td>10. Invaded my privacy</td>
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<td>11. Enjoyed talking things over with me</td>
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<td>12. Frequently smiled at me</td>
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<td>13. Tended to baby me</td>
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<td>14. Did not seem to understand what I needed</td>
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<td>15. Let me decide things for myself</td>
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<td>16. Made me feel I wasn’t wanted</td>
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<td>17. Could make me feel better when I was upset</td>
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<td>18. Did not talk with me very much</td>
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<td>19. Tried to make me dependent on her/him</td>
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<td>20. Felt I could not look after myself unless she/he was around</td>
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<tr>
<td>21. Gave me as much freedom as I wanted</td>
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<tr>
<td>22. Let me go out as often as I wanted</td>
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<tr>
<td>23. Was overprotective of me</td>
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<td>24. Did not praise me</td>
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<tr>
<td>25. Let me dress in any way I pleased</td>
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Appendix B
ATTITUDE AND FEELINGS SURVEY

Directions: Listed below are a number of statements which best describe various feelings, attitudes, and behaviors that people have. Read each statement and then mark on your sheet:

(a) if the statement is always true for you or you strongly agree with it,

(b) if the statement is usually true for you or you generally agree with it,

(c) if the statement is sometimes true for you or you slightly agree with it,

(d) if the statement is hardly ever true for you or you generally disagree with it.

(e) if the statement is never true for you or you strongly disagree with it.

Please answer all of the questions. If you have difficulty answering a particular question, choose the response which is closest to your feelings on that item, even though you may not feel strongly one way or another.

Please use a #2 pencil to complete the answer sheet and erase completely any answer you may wish to change. In marking your choices, be sure the number of the statement you have just read is the same number you are marking on the answer sheet.
1. Sometimes my parents are so overprotective I feel smothered.

2. I sometimes feel so powerful that it seems like there is no feat which is too difficult for me to conquer.

3. Being alone is a very scary idea for me.

4. Often I don't understand what people want out of a close relationship with me.

5. I enjoy being by myself and with others approximately the same.

6. I can't wait for the day that I can live on my own and am free from my parents.

7. Sometimes it seems to me that people really want to hurt me.

8. I worry about death a lot.

9. Most parents are overcontrolling and don't really want their children to grow up.

10. Sometimes I think how nice it was to be a young child when someone else took care of my needs.

11. I am friendly with several different types of people.

12. I don't see the point of most warm, affectionate relationships.

13. I particularly enjoy looking at my own body in the mirror.

14. One of my parents knows me so well they almost always know what I am thinking.

15. If I told someone about the troubles I have, they would probably not understand.

16. I do best when I'm by myself and don't have other people around to bother me.

17. Even when I'm very close to another person, I feel I can be myself.

18. Usually when I'm doing something with my friends, I act like a leader.

19. I feel lonely when I'm away from my parents for any extended period of time.

20. During the past 10 years I have not slept more than 3 hours per night at any time.

21. Most people are basically worried about their own good and don't care about helping other people.

22. I feel so comfortable with one of my friends that I can tell him/her anything I feel.
23. I frequently worry about being rejected by my friends.
24. My friends and I have some common interests and some differences.
25. I can't feel that love has much of a place in my life.
26. I frequently worry about breaking up with my boyfriend/girlfriend.
27. My parents seem much more concerned about their own plans than they do about mine.
28. Even with my good friends I couldn't count on them to be there if I really needed them.
29. I feel that other people interfere with my ability "to do my own thing."
30. Being close to someone else is uncomfortable.
31. Although my best friend does things I do not like, I still care about him/her a great deal.
32. Considering most of the people I know, I find myself comparatively better off.
33. I often feel rebellious toward things my parents tell me to do.
34. I am comfortable with some degree of conflict in my close relationships.
35. Sometimes I feel very sad about having to say goodbye to a teacher I really like.
36. Sometimes I amaze myself with my own capabilities and talents.
37. I think about some of my friends when I'm alone because I miss them.
38. My life is fulfilled without having best friends.
39. Although I'm like my close friends in some ways, we're also different from each other in other ways.
40. I am quite worried that there might be a nuclear war in the next decade that would destroy much of this world.
41. My friendships tend to be of the "best-friend" kind.
42. I feel dominated by my boyfriend/girlfriend.
43. I feel that other people admire and look up to me.
44. One of my friends knows me so well I feel he/she can practically read my mind.
45. Friendship isn't worth the effort it takes.
While I like to get along well with my friends, if I disagree with something they’re doing, I usually feel free to say so.

I have a habit of switching from one close relationship to another.

The teacher’s opinion of me as a person is very important to me.

My parents seem very uninterested in what’s going on with me.

I know some of my friends so well, it seems like I can read their minds.

I feel overpowered or controlled by people around me.

When I’m with a group of friends, I sometimes act like the leader and at other times more like a follower.

I think it is silly when people cry at the end of an emotional movie.

With my favorite teacher, I can share some of my most personal fears and concerns.

I believe that God looks over and protects me from danger.

It sometimes seems that my parents wish they hadn’t ever had me.

I don’t really need anyone.

It’s quite a struggle for me to be a person independent from my parents.

I had many fears of monsters and/or ghosts when I was younger.

I’m quite worried about the possibility of one of my parents dying.

When I think of the people that are most important to me I wish I could be with them more and be closer to them emotionally.

I feel particularly comfortable when I’m going things with a group of friends together, rather than by myself.

It’s hard for me to really trust anyone.

One of my favorite teachers is amazingly similar to me in personality.

Even when they don’t say it, I can sometimes tell that people admire me by the look in their eyes.

I don’t really love anyone.

My parents keep close tabs on my whereabouts.

In school, I have a special relationship with one teacher that goes further than the average teacher-student bond.
62. I feel my parents' roles restrict my freedom too much.
63. I have not seen the sun shine for over a year now.
64. People sometimes seem amazed by my own abilities.
65. When I am truly friendly with someone, it's usually the case that they know both my good parts and my bad parts.
66. Eating delicious food is one of the greatest pleasures in my life.
67. I feel that the degree to which I satisfy the needs of my friends and they satisfy my needs is approximately equal.
68. There's a certain sense of oneness that I feel with other people.
69. I see dependency as a sign of weakness.
70. When I hope somebody will do something for me, I often find myself disappointed.
71. No one seems to understand me.
72. Before I go to sleep at night, I sometimes feel lonely and wish there were someone around to talk to or just to be with.
73. If I let myself get close to someone else I would probably get burned.
74. There is a sense of interconnectedness that links people of all kinds together.
75. God knows my life, I will go where he leads me.
76. Other people are easily impressed by me.
77. Sometimes it seems my parents really hate me.
78. I have no living relatives on this earth at the present time.
79. As long as I don't depend on anyone, I can't get hurt.
80. Knowing that other people find my physical appearance attractive is very pleasing to me.
81. I often sense admiration from those around me.
82. At home, I seem to be "in the way" a lot.
83. The idea of going to a large party where I would not know anyone is a scary one for me.
84. I feel special, compared to other people.
92. In my group of friends I am often the center of attention.

93. I preferred the younger years of life when I could rely more on my parents for guidance to get along.

94. I usually get positive "vibes" from other people regarding how they feel about me.

95. I can't have much of a need for close friendships with others.

96. I worry about being disapproved of by my teachers.

97. Other people seem to be impressed by my capabilities.

98. I would like to always live in the same town as my parents and siblings so we could spend a lot of time together.

99. My teachers give me advice about my social life.

100. I like parties best when my close friends are there and there is an intimate atmosphere.

101. My personal plans are more important than my relationships.

102. I am greatly looking forward to getting out from under the rule of my parents.

103. I would get upset if I found out my teacher was mad at me or disappointed in me.
Answer Sheet: ATTITUDE AND FEELINGS SURVEY

1. 36. 71.
2. 37. 72.
3. 38. 73.
4. 39. 74.
5. 40. 75.
6. 41. 76.
7. 42. 77.
8. 43. 78.
9. 44. 79.
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27. 62. 97.
28. 63. 98.
29. 64. 99.
30. 65. 100.
31. 66. 101.
32. 67. 102.
33. 68. 103.
34. 69. 104.
35. 70. 105.
Appendix C
INTERPERSONAL REACTIVITY INDEX

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter on the answer sheet next to the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

ANSWER SCALE:

A  DOES NOT DESCRIBE ME WELL
B
C
D
E  DESCRIBES ME VERY WELL

SCORING SCALE  ITEM

1. I daydream and fantasize, with some regularity, about things that might happen to me.
2. I often have tender, concerned feelings for people less fortunate than me.
3. I sometimes find it difficult to see things from the "other guy's" point of view.
4. Sometimes I don't feel very sorry for other people when they are having problems.
5. I really get involved with the feelings of the characters in a novel.
6. In emergency situations, I feel apprehensive and ill-at-ease.
7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.
8. I try to look at everybody's side of a disagreement before I make a decision.
9. When I see someone being taken advantage of, I feel kind of protective towards them.
10. I sometimes feel helpless when I am in the middle of a very emotional situation.
11. I sometimes try to understand my friends better by imagining how things look from their perspective.

12. Becoming extremely involved in a good book or movie is somewhat rare for me.

13. When I see someone get hurt, I tend to remain calm.

14. Other people's misfortunes do not usually disturb me a great deal.

15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.

16. After seeing a play or movie, I have felt as though I were one of the characters.

17. Being in a tense emotional situation scares me.

18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.

19. I am usually pretty effective in dealing with emergencies.

20. I am often quite touched by things that I see happen.

21. I believe that there are two sides to every question and try to look at them both.

22. I would describe myself as a pretty soft-hearted person.

23. When I watch a good movie, I can very easily put myself in the place of a leading character.

24. I tend to lose control during emergencies.

25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
27. When I see someone who badly needs help in an emergency, I go to pieces.

28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.
Appendix D: Stress Innoculation Training

Sessions two, three, and four in the experimental condition focused on learning progressive muscle relaxation exercises and coping skills techniques drawn from Meichenbaum’s (1985) stress inoculation training model. During session two the concept of relaxation was presented as a method of quieting the tensions of body and mind designed to target a wide range of specific goals including preparing and tolerating stressful activity, recovering from stressful activity, preparing for sports, study, or work, and minimizing anxiety associated with performance stress. Recognition of signals of internal stress, minimization of automatic anxiety responses, and rechanneling of energy into productive, goal-oriented outlets were emphasized as the focus of a growth and change model of skills training (Smith, 1985). A discussion of stress, stressors, anxiety, and anxiety-related symptoms followed. Subjects were asked to write down three examples of mild anxiety-provoking situations they planned to target with relaxation techniques. This section was viewed as the educational phase of training (Kiselica, Baker, Thomas, & Reedy, 1994).

Session three consisted of techniques for progressive muscle relaxation training using isometric squeeze exercises developed by Jacobson (1938). In order to implement this phase of the intervention, all subjects were asked to sit at a tablet desk and instructed to place their feet flat on the floor. The facilitator offered the option of either closing one’s eyes or staring at a stationary object but emphasized that if, at any point during the training, someone felt uncomfortable, she did not have to continue with the exercises.

Before beginning the exercises, the facilitator demonstrated how to take a deep breath and exhale the air slowly through a small opening between the lips. Subjects were encouraged to utilize this technique when feeling anxious or stressed (Jacobson, 1938).

Instructions for the isometric squeeze techniques were as follows:
First, rest both arms in your lap. Now, gently shrug your shoulders. Pull them up or back, whatever feels better. Squeeze the muscles more and more until the squeeze feels most complete and pleasurable. Now, release the tension. Let your shoulders hang. Let the tension flow out. Notice how you can create both feelings of tension and relaxation in your shoulders. For about 30 seconds let your shoulders relax more and more and attend to the pleasant sensations (Jacobsen, 1988).

In order to allow sufficient time to address each of the following 11 muscle groups: 1. hand; 2. arm; 3. arm and side; 4. back; 5. shoulder; 6. back of neck; 7. face; 8. front of neck; 9. stomach and chest; 10. leg; and 11. foot; this researcher chose the Quick Squeeze Strategy (Jacobson, 1988) which involved quickly tensing the muscle group while keeping the rest of the body relaxed. Subjects were instructed to create as much tension as possible in the muscle group (without pain), hold the tension for 6 seconds, release, and allow the muscle to drop like a floppy rag doll for 30 seconds (Jacobson, 1988).

After the relaxation exercises, the subjects were encouraged to discuss their reactions to and feelings about the progressive muscle relaxation. Each subject was given a practice outline which served as a guide to relaxation and instructed to practice these exercises at home before going to sleep. A relaxation progress sheet was given to each student to record whatever successes or difficulties were encountered while practicing. This section was considered to be the training phase of treatment (Kiselica et al., 1994).

Phase three, the application phase, would become integrated as part of the ongoing training over the remaining seven weeks. Session four began by reviewing the techniques for progressive muscle relaxation and the subjects' relaxation progress sheets. The concept of cue-controlled relaxation was introduced as a method whereby participants associate the relaxation response with a phrase or word. Next, they rehearsed the technique for eliciting relaxation by repeating the cue word or phrase in real anxiety-provoking situations. A discussion of the cue-controlled relaxation procedure, accompanied
by printed handouts, helped create greater familiarity with the process. The subjects were instructed to apply cue-controlled relaxation in one of the three stressful situations previously identified as well as encouraged to continue their daily progressive muscle relaxation practice. Throughout the remaining sessions attention was focused on transferring the mastery of this strategy to the external environment (Kislica et al., 1994).
Appendix E
Appendix E: Assertiveness training

Session five of the intervention phase, and the first session of assertiveness training, was didactic with content focused primarily on discriminating among assertive, non-assertive, and aggressive behaviors. Subjects were instructed on how to define one's rights and to politely express feelings. As a way of reinforcing assertive behaviors, subjects were encouraged to utilize their notebooks to record situations in which they successfully or unsuccessfully implemented the skills learned during the training sessions.

The following training procedure for each situation was administered through the use of audiotape: a. the narrator described the situation; b. the Ss responded covertly; c. the Ss heard the responses of one female assertive model; d. the narrator coached the S's regarding what constituted a good assertive response in the situation; e. the subject reflected on her response; f. the situation was repeated; g. the Ss responded covertly again (McFall & Lillesand, 1971). One situation was presented during session five, two during session six, and one during session seven. Seven minutes were allotted for each situation with one minute between situations. The remaining time at the end of the session was reserved for comments and feelings about the stimulus situations. During session six, subjects were requested to submit an example of an assertive response to be shared with fellow classmates at the next meeting as a stimulus for future practice.

The five standardized training stimulus situations were as follows:

Situation I:

*NARRATOR: A person in one of your classes, someone whom you do not know very well, borrowed your class notes weeks ago, then failed to return them at the next class, thus forcing you to take notes on scrap paper. Now this person comes up to you again and says, 'Hey, mind if I borrow your class notes again?' What do you say? (Subject practices responding...covertly.)*

*NARRATOR: Now listen to a response of [an assertive subject] to this same situation.
NARRATOR: "No, I just can't be sure you're going to have them back to me in time."

NARRATOR: (Coaching): Notice that...[this assertive subject] let the person know that [her] refusal was based on his/her past behavior. [Her response was brief] and without any ambiguity. [Her voice] expressed some irritation over the past behavior of this person, but in general [her] response [was] well controlled. Now (...think back) to your response to this situation and compare it to the response of the [model] you have just heard. (...10-second pause.)

NARRATOR: Now you will hear the same situation again. This time try to make your response more assertive. (Repeat situation. Subject practices [covertly] responding.)* (McFall & Lillesand, 1971, p. 315-6).

Situation II:

NARRATOR: In this scene, picture yourself standing in a ticket line outside of a theatre. You've been in line now for at least ten minutes and it's getting pretty close to show time. You're still pretty far from the beginning of the line, and you're starting to wonder if there will be enough tickets left. There you are, waiting patiently, when two people walk up to the person in front of you and they begin talking. They're obviously friends, and they're going to the same movie. You look quickly at your watch and notice that the show starts in just two minutes. Just then, one of the newcomers says to his friend in line:

NEWCOMER: Hey, the line's a mile long. How 'bout if we cut in here with you?

PERSON IN LINE: "Sure, come one. A couple more won't make any difference." What do you say? (Subject practices responding...covertly.) (McFall & Marston, 1970, p.297)

NARRATOR: Now listen to the response of [an assertive subject] to this same situation.

NARRATOR: Excuse me, I have been waiting in this line for awhile so I would appreciate it if you would wait at the end of the line just like I did.
NARRATOR: (Coaching) Notice that...[this assertive subject] let the person know that he/she was violating her rights and that her expectation was that each person had to abide by the same rules as everyone else for waiting in line. [Her response was brief] and without any ambiguity. [Her tone was firm and confident] but in general [her] response was well controlled. Now [...]think back] to your response to this situation and compare it to the response of the [model] you have just heard. (...10-second pause.)

NARRATOR: Now you will hear the same situation again. This time try to make your response more assertive. (Repeat situation. Subject practices [covertly] responding.)* (McFall & Lillesand, 1971, p. 315-6).

SITUATION III:

NARRATOR: "You've gone to lunch at a restaurant. You've ordered a chef's salad with Thousand Island dressing. However, when you get your salad it has blue cheese dressing on it. You prefer Thousand Island. The waiter/waitress is approaching your area now." (Galassi & Galassi, 1977, p.128) What do you say? (Subject practices responding...covertly.)

NARRATOR: Now listen to a response of [an assertive subject] to this situation.

NARRATOR: "I ordered my salad with Thousand Island dressing and it came with blue cheese. I'd like you to return this one and bring me a salad with Thousand Island dressing" (Galassi & Galassi, 1977, p. 128.)

NARRATOR: (Coaching) Notice that...[this assertive subject] let the person know that [her] refusal to accept the salad was based on her awareness of her likes and dislikes and a confidence that she had expressed her choice clearly. [Her response was brief], without any ambiguity, and expressed an expectation on how she wanted to have the situation resolved. [Her voice] was polite and did not suggest that the waitress was incompetent because she had made an error. Now (...think back) to
your response to this situation and compare it to the response of the [model] you have just heard.
(...10-second pause.)

NARRATOR: Now you will hear the same situation again. This time try to make your response more assertive (Repeat situation. Subject practices [covertly] responding.)" (McFall & Lilesand, 1971, p. 315-6).

SITUATION IV:

NARRATOR: "You were assigned to work on a project with another classmate in your class about a month ago. You have been doing all the work by yourself. The project must be ready in five days, and you need his help if the project is to completed by then. You decide to go and speak to this person" (Galassi & Galassi, 1977, p.157). What do you say? (Subject practices responding...covertly.)

NARRATOR: Now listen to a response of [an assertive subject] to this same situation.

NARRATOR: (Coaching) Dan, our project is due in five days and I think it's important to have a meeting about how we're going to present it to the class. I've finished sections one and two and if you would complete three and four, we can make a date over the week-end to go over it together before Monday's due date.

NARRATOR: Notice that...[this assertive subject] is not accusatory but lets Dan know that she has been working on the project and has the expectation that he will fulfill his responsibility by a certain date. She decisively takes control of the situation while reinforcing the final cooperation of both participants. Her response was expressed in a firm tone of voice that communicated she would not consider excuses but had thought out a plan for cooperatively completing the project. Now (...think back) to your response to this situation and compare it to the response of the [model] you have just heard. (...10-second pause.)
NARRATOR: "Now you will hear the same situation again. This time try to make your response more assertive (Repeat situation. Subjects practice [covertly] responding.)" (McFall & Lillesand, 1971, p.315-6).

SITUATION V: You and your mother have one car that you share between the two of you. Your have made plans to use the car tonight. Your mother was made aware of your plans a week ago and agreed that you could have the car tonight. A half-hour before you're ready to leave, your mother decides she needs the car to go to a friend's house. She is getting into the car as you approach her. What do you say? (Subject practices responding...covertly.)

NARRATOR: Now listen to a response of [an assertive subject] to this same situation.

NARRATOR: "Mom, I cleared my plans with you for tonight [last week] and even reminded you of them again last [night]. I hope you didn't forget that I made a commitment to Jane to have dinner with her tonight and am going to need to drive to the restaurant."

NARRATOR: (Coaching): Notice that...[this assertive subject] let her mother know that she had planned appropriately with her for this evening and had her prior approval to use the car. By mentioning her commitment to Jane she reinforces that not only her rights but the rights of another person would be violated by her mother's interference with her plans. [Her voice] expressed some irritation over her mother's forgetfulness, but in general [her] response was well controlled. Now [...think back] to your response to this situation and compare it to the response of the [model] you have just heard. (...10-second pause.)

NARRATOR: "Now you will hear the same situation again. This time try to make your response more assertive. (Repeat situation. Subjects practice [covertly] responding)" (McFall & Lillesand, 1971, p.315-6).
Appendix F
Appendix F: Empathy training

The facilitator began the empathy intervention by having the group identify human emotions with the use of black-and-white drawings which depicted anger, sadness, happiness, fear, and worry and the identification of situations which would elicit these feelings. A checklist on the appropriate expression of feelings and emotions was distributed to each group member. The subjects were instructed to review the list independently and to respond to each of the questions in their notebooks and to refer back to this list when they encountered emotional situations outside of the group.

An explanation of the properties of social awareness which is an interpersonal skill that promotes one’s capacity for empathy and intimacy was also reviewed with the group. The following areas were considered components of this awareness: 1. being in touch with what is going on inside yourself (especially your emotions) as a prerequisite for communicating with others, i.e. "I feel nervous right now, because I’m not sure why Carol has been cold to me" (Egan, 1977, p.111) 2. being in touch with what is going on inside others through the use of good listening skills that allow for an understanding and a feeling of what others are experiencing, i.e. Carol seems really hurt because no one is paying attention to her. 3. being in touch with the communication strengths and weaknesses of the people you meet, i.e. Carol allows herself to get bored with other people’s stories of their own struggles but doesn’t address her boredom immediately and instead buries it and finally dumps it on others in the form of anger OR Carol is very sensitive to the feelings of others, is willing to listen and is able to express her own feelings appropriately in social interactions (Egan, 1977).

The individuals in the videotapes were two female adolescents with a mean age of 17 years.

SITUATION 1: Girl 1: "Why didn’t you show up for my birthday party? Was it too much to expect one of my best friends to come? I kept waiting for you to walk in the door, and you never did! I didn’t even get a phone call from you! What’s this all about?" (Egan, 1977, p.120).
How is this person feeling? Angry and hurt.

Unempathic Response by Girl 2: You of all people should know how busy and crazy my life has been lately it's hard for me to keep track of everything that's going on. We're really good friends and my coming to your party shouldn't have to be proof of that.

Girl 2 completely ignores her friend's feelings and instead shifts the focus to her own life with the expectation that Girl 1 will be understanding of her situation. Girl 2 further negates Girl 1's feelings by attempting to put the responsibility for the friendship on her rather than taking responsibility for her own behavior.

Empathic Response by Girl 2: I can understand how angry and hurt you are about my forgetting your birthday. I'm really sorry but I hope that we can celebrate your birthday together very soon.

Girl 2 identifies the feelings of Girl 1 without trying to defend her own behavior. Her apology and her offer to repair what has happened is an attempt to show her friend that she values and wants to preserve their relationship.

SITUATION 2: Girl 1: "I'm never really satisfied with myself. For instance, I'd like to be very popular with the other students. I do have good friends, but I'm not really what you'd call popular. I'd also like to be good at some sport like tennis, but I'm just average. I could give a lot of other examples. I'm just too average in almost everything, and I don't like it." (Egan, 1977, p.164).

How is this person feeling? Disappointed and angry with herself because she doesn't live up to her expectations of success.

Unempathic Response by Girl 2: "I'll bet that your real problem is that you haven't received enough attention from your parents. If you had, you'd be more satisfied with yourself." (Egan, 1977, p.164.)
"[Girl 2's] response isn't useful. It doesn't help [her] get closer to [Girl 1]. Interpretations like this one are part of the psychologist game, which is a poor game to play in interpersonal relationships. Playing psychologist destroys mutuality; it creates distance. It makes one person the helper and the other the client." (Egan, 1977, p.164)

Empathic response by Girl 2: You seem to be feeling down on yourself because you set high expectations for your success and seem to discount many of your accomplishments.

The empathic response of Girl 2 identifies both the feeling and its source. Without analyzing it origins, she addresses Girl 1's self-criticism while, at the same time, reinforces recognition of her accomplishments.

SITUATION 8: Girl 1: "I've been having a lot of trouble in school this semester. I think that I'm going to fail a couple of subjects. What's worse is that it's messing up my relationships with my friends. People begin to avoid me when they see me messed up." (Egan, 1977, p. 152)

How is this person feeling? Fearful of failure in school and the potential loss of important relationships that provide her with support. Helpless about how to address her problem.

Unempathic Response by Girl 2: I guess you'll just have to work harder at everything. That's how I handled things when I was having trouble with one of my subjects and now I'm doing well in all areas of my life.

Rather than being understanding of her friend's fears of failure, Girl 2 not only gave advice but also refocused the conversation onto herself and her successes, probably making her friend feel more incompetent.

Empathic response by Girl 2: 'Feeling messed up in school is bad enough. But when it also messes things up with your friends - that's really bad.' (Egan, 1977, p.340.)
This response addresses the feelings of Girl 1 of not being in control of two important areas of her life and the impact that this situation has on her self-esteem. Girl 2 acknowledges that she understands her predicament, perhaps by having experienced it herself, and makes herself available to hear more about the other girl's feelings.

SITUATION 4: Girl 1: "Boy, am I glad that you finally talked to me. I've been wondering whether I did something to you or hurt you. I've been sitting here wondering how to talk to you. But now I find out that you haven't been having bad feelings about me at all!" (Egan, 1977, p.130)

How is this person feeling? "Relieved, surprised, good, off the hook." (Egan, 1977, P. 337)

Unempathic response by Girl 2: Carol, you're just so sensitive. It was no big deal and you're acting as if I hated you. You have to keep things in a better perspective.

This response discounts Girl 1's sensitivity and minimizes the situation between them by acting as if what happened was unimportant. She also limits the possibility that Girl 1 will feel comfortable approaching her with ambiguous feelings in the future.

Empathic Response by Girl 2: I'm really glad that I was able to clear things up for you. In the future, I hope that you won't assume that I have bad feelings about you but will come and talk to me right away.

This response validates Girl 1's feelings of confusion over Girl 2's distance. She encourages Girl 1 to address her directly with her uncertainties and reassures her that she will be available to talk about what is on her mind.
Appendix G
TELEPHONE CONTACT WITH PARENTS

Hello! My name is Lynn Nicoletta. I am calling on behalf of Ms. Swenson, Mrs. Donahue, and Mr. Rigsbee to inform you that your daughter has been selected as a possible participant in a doctoral dissertation project which is going to be conducted at the high school in the early part of 1999. This study is designed as a preventive intervention to assist students in making healthy transitions after high school. Research has shown that developing positive coping strategies can prepare students to confront the challenges of new situations while increasing their ability to make successful adjustments.

Mr. Blueglass has given his full endorsement to this project and encourages parents to give their daughters permission to participate. A member of the guidance department will be passing out detailed consent forms in homeroom this week which must be signed by both you and your daughter and returned to the guidance office. Upon completion of this project, commemorative T-shirts will be presented at a celebratory pizza party. In addition, those students involved in one of the two experimental treatment conditions will receive one-half credit of community service. If you have any questions after you receive the consent form, please feel free to call me at (201) 529-1798. I hope that you will consider allowing your daughter to participate. Thank you for your time.
Appendix H
Lynn K. Nicoletta, M.A., Ed.S.

Dear Parent:

Please check the appropriate boxes and return this form in the enclosed envelope:

___ I have read and understand the permission letter. I give consent for my daughter to participate in this study.
___ I have received a copy of Mrs. Nicoletta’s letter for my records.
___ I would like more information before giving consent for my daughter to participate in this study.
___ I do not wish my daughter to participate in this study.

“This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subjects’ privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the Office is (973) 378-9809. I have read the material above, and any questions I asked have been answered to my satisfaction. I agree to participate in this activity, realizing that I may withdraw without prejudice at any time.”

Parent’s Signature/Date________________________________________

Student’s Name________________________________________

Thank you.
Dear Student:

Please check the appropriate boxes and return this form and the parental consent form in the enclosed envelope:

___I have read and understand the permission letter. I agree to participate in this study.

___I do not wish to participate in this study.

"This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Subjects Research. The IRE believes that the research procedures adequately safeguard the subjects' privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the Office is (973) 378-9809. I have read the material above, and any questions I asked have been answered to my satisfaction. I agree to participate in this activity, realizing that I may withdraw without prejudice at any time."

Student's Name________________________________________

Student's Signature/Date______________________________

Thank you.
Appendix I
Dear Student:

As part of a doctoral dissertation project at Seton Hall University, I will be conducting a study to learn more about what types of preventive interventions can help adolescent females develop positive coping strategies that contribute to healthy transitions after high school. I am seeking female student volunteers, aged 16 and above, to participate in the study.

What is involved? All of the students chosen to participate in the study will be assigned to one of the following three groups - an experimental group, a placebo group, or a control group. The experimental group will involve relaxation training to help manage feelings of anxiety, assertiveness training to develop the ability to assert one’s rights without infringing on the rights of others, and social skills training to identify and understand the feelings of others. Throughout the psychological literature, each of these skills has been shown to improve one’s ability to cope with stress. The placebo group is designed as an interactive group focusing on adolescent issues. The control group will receive no training but will participate in only the two assessment sessions. If the results of the study prove to be effective, those students not selected for the experimental group will have the opportunity to participate in a condensed version of the training program.

During the first and last session of each group, questionnaires will be administered with items that tap issues of independence, childhood perceptions, and attitudes towards other people. These sessions will last for approximately 90 minutes. Some students will be assigned to either the experimental or placebo group, requiring them to remain at school for ninth period (35 minutes) over a 10 week period, beginning February 1, 1999 and ending April 12, 1999 plus the two assessment sessions, January 11, 1999 and April 19, 1999. Other students will be asked to participate in only the two assessment sessions. No mandatory homework assignments are involved although students are encouraged to practice new skills or make written entries into notebooks provided by the group facilitator.

Pride and Spirit
Potential Benefits and Concerns: Although this project does not interfere with class time or require students to make up missed work, it does involve a commitment of time for twelve consecutive weeks. Possible benefits include the development of positive coping strategies necessary to make healthy transitions after high school. A long-term benefit can be the establishment of preventive training programs within our school system that foster one’s ability to effectively adapt to the challenges of becoming a mature adult. Additionally, those students participating in the experimental and placebo groups will receive one-half credit of community service. All subjects will receive a T-shirt and will enjoy a pizza party upon completion of the study.

Participation is Voluntary. Your participation in this study is completely voluntary. There will be no penalty if you do not wish to be in this study. You may withdraw at any time or refuse to answer any of the questions. Non-participation and/or withdrawal will not impact your school record. This project has been approved by the Board of Education and has the endorsement of Mr. Blueglass, Mrs. Donohue, and Mr. Riggabee.

Information is Confidential. All information will be held strictly confidential and will in no way become part of any school record. Only this researcher will have access to the questionnaires. Once the questionnaires have been collected, your name will be deleted and replaced with a number so that you can no longer be connected to any of the specific answers. Although this researcher will protect the confidentiality of all students, it is impossible to safeguard against the possibility that information will be shared among the participants.

Questions? I would appreciate it if you would return the enclosed parent and student consent forms whether or not you give permission to participate, so that I know that this information has reached you. You may keep the attached copy of this letter for your records. If you have any questions, please feel free to contact Lynn Nicoletta (529-1793). Thank you for your consideration.

Sincerely,

[Signature]

Pride and Spirit
Appendix J
Dear Ms. Nicoletta:

Thanks for your interest in the Interpersonal Reactivity Index. You of course have my permission to use the instrument in your dissertation research, and to reproduce it any way necessary for that purpose. I am enclosing with this letter a copy of the scale, along with scoring instructions, and a paper describing the IRI's development. If I can be of any further assistance as you work on your dissertation, please do not hesitate to ask. Best of luck to you.

Sincerely,

Mark H. Davis
Associate Professor
LYNN K. NICOLETTA, M.A., Ed.S
7 Thunderhead Place
Mahwah, NJ 07430
Home (201) 529-1793 • Office (973) 325-6265

Gordon Parker, M.D.
School of Psychiatry
Prince of Wales Hospital
Randwick
New South Wales 2031
Australia

July 21, 1998

Dear Dr. Parker:

I am completing my graduate studies in the Clinical Psychology Doctoral Program at Seton Hall University in New Jersey and, accordingly, will be beginning my internship placement in September 1998.

Over the past twelve months, I have been working on a dissertation proposal focusing on resiliency in adolescent females. One of the variables I am planning to investigate is the effect of positive and negative attachment experiences on the development of stress-resistant capacities. During the course of my research, I was very excited to discover the Parental Bonding Instrument and consider your measure to be one of the most valid and reliable tools to assess attachment.

In light of the importance of attachment as a most integral part of my study, I would like your permission to use the PBI as one of the instruments in my dissertation research. At this point, I estimate the size of my sample to be 36 subjects, however, I will be more exact once I complete the power analysis. If you approve my request, I am prepared to pay whatever cost are involved for printing, shipping, etc.

Finally, I hope to have the opportunity to speak with you personally about my proposal and to learn more about your continuing research with the PBI. Thank you.

Sincerely yours,

Lynn K. Nicoletta
Lynn K. Nicoletta, M.A., Ed.S.

Dear Lynn,

No

not as indicated.

flaws

August 1, 1998
Appendix K
Seton Hall Institutional Review Board:

Please allow this letter to serve as confirmation of the institutional support and approval that Mahwah High School will give to the Doctoral Dissertation proposed by Lynn Nicoletta.

As Superintendent of the Mahwah School District, please be advised that I have the authority to give this approval. Both Mrs. Donohue, principal of the Mahwah High School, and Mr. Riggsbee, head of the Mahwah High School Guidance Department, fully endorse this project. We believe that Ms. Nicoletta's study has significant implications for both the psychological and educational community and look forward to our involvement in this endeavor.

Sincerely,

H. Murray Blueglass
Superintendent of Schools

HMB
ml