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I am submitting herewith a dissertation written by Matthew Bruce Wintersteen entitled "Mediational Effects of the Five-Factor Model of Personality on the Stress-Psychopathology Relationship in Adolescents." I have examined the final paper copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

Robert G. Wahler, Major Professor

We have read this dissertation
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Vice Provost and Dean of Graduate Studies

MEDIATIONAL EFFECTS OF THE FIVE-FACTOR MODEL OF PERSONALITY ON THE STRESS-PSYCHOPATHOLOGY RELATIONSHIP IN ADOLESCENTS

A Dissertation
Presented for the
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DEDICATION

This dissertation is dedicated to my wife, Carrie, my parents, Bruce and Anne Wintersteen, and my in-laws, Richard and Patricia Miller, for their faith, support, and encouragement. Without them, none of this would have been possible.

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ABSTRACT

The present study focuses on the contribution of the Big Five personality factors as diatheses mediating the relationship between stress and psychopathology in adolescents. A total of 581 participants (average age = 14.3 years) completed the Youth Self-Report, Adolescent Big Five Inventory, Stress Test for Children, and Perceived Stress Scale in their public school classrooms. Results indicated that stress appraisal mediated the relationship between life events and psychopathology. Furthermore, high neuroticism, low extraversion, low openness, low agreeableness, and low conscientiousness mediated the relationship between stress appraisal and total problems. High neuroticism, low extraversion, low openness, low agreeableness, and high conscientiousness mediated the relationship between stress appraisal and internalizing problems. High neuroticism, high extraversion, low agreeableness, and low conscientiousness mediated the relationship between stress appraisal and externalizing problems. Clinical implications, including the management of trait expression as a focus of therapy and triage predictions when catastrophic events effect large groups of adolescents, as well as future research directions are discussed.

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CHAPTER I

INTRODUCTION

Mediational Effects of the Five-Factor Model of Personality on the Stress-Psychopathology Relationship in Adolescents

Several research studies have examined the relationship between stress appraisal and developmental psychopathology. In addition, emerging adolescent research is beginning to explore correlational data between personality variables and psychopathology. Lazarus and Folkman (1984) describe a transactional model of stress appraisal in which individuals attribute beliefs concerning coping resources to actual events. If the resources are perceived as being adequate to handle the present demand, then the event is considered to be non-threatening, and there is no effect or minimal effect on mental and physical health. What still remains uncertain in the literature is differences between individuals in the appraisal process. Why do some individuals perceive an event to be threatening while others do not? The answer to this question has considerable implications in our understanding of resilience and vulnerability to adolescent psychopathology in the face of challenging environmental stimuli. Current research fails to draw a clear connection between stress appraisal and psychological well-being. Compas, Orosan, and Grant (1993) argue that even prospective models, intended to show causality, fail to account for "third variables" that influence both stress and psychopathology. Dohrenwend and Dohrenwend (1981) suggest internal mediating factors are the factors contributing to one's vulnerability to psychopathology.

Diathesis-Stress Models

Diathesis-stress models of psychopathology have generated a great deal of interest over the last decade. Originally proposed as a theoretical model to address factors associated with the onset of schizophrenia (Rosenthal, 1963; Zubin & Spring, 1977), models identifying interaction effects of the biological and social worlds have extended into other areas of psychopathology. Of importance is the role of certain predisposed factors, or diatheses, resulting in the inability to adapt to stressful environmental events. While environmental events span a large spectrum of possibilities, types of diatheses generally fall into three broad areas: 1) biological predispositions (e.g., Rosenthal, 1963), 2) cognitive styles (Beck, Rush, Shaw, & Emery, 1979), and 3) personality traits (Trull & Sher, 1994). The present study focuses largely on the contribution of personality traits as diatheses mediating the relationship between stress and psychopathology in adolescents, as personality has been implicated with respect to resilience and vulnerability to psychopathology. A considerable amount of research has pointed to resilience as an interaction between temperament and cognitive/intellectual ability (Garmezy, 1993). Temperament is often discussed as a form of social competence (Finkelman, Ferrarese, & Garmezy, 1989; Masten et al., 1999); however, the current literature appears unable to differentiate between temperament and cognitive/intellectual ability as sources of resilience, nor is the current literature capable of describing underlying traits of social competence in children and adolescents.

Stress and Psychopathology

A fair amount of research has been conducted on the effects of stress appraisal, or subjective stress, and psychological well-being in children and adolescents. These studies report perceptions of high stress to be positively correlated with depression (Compas et al., 1993; Martin, Kazarian, & Breiter, 1995), suicide (Bauwens & Hourcade, 1992), cigarette smoking (Stacy, Sussman, Dent, Burton, & Flay, 1992), inhalant use (Mitic, McGuire, & Neumann, 1987), and problem drinking (Wills, 1986). In addition, high stress is positively correlated with a negative sense of coherence and confidence (Frenz, Carey, & Jorgensen, 1993). Even in adult populations, research suggests that high appraisal of stress is predictive of pathological relapse (Swendsen, Hammen, Heller, & Gitlin, 1995). Research on life events stress, or objective stress, has pointed at significant positive correlations between number of stressful life events and externalizing, internalizing, and total problems behaviors (Mathijssen, Koot, & Verhulst, 1999).

Stress Appraisal and Personality

The adolescent literature has failed to adequately address the relationship between personality and stress appraisal. However, a significant amount of adult research offers a number of hypotheses for adolescents. The evidence supporting a positive and significant relationship between neuroticism and stress appraisal is fairly conclusive. Nearly a dozen studies have examined this relationship (e.g., Boland & Cappeliez, 1997; Jelinek & Morf, 1995; Mills & Huebner, 1998; Shewchuk, Elliott, MacNair-Semands, & Harkins, 1999). The results clearly indicate that neuroticism is not only positively related but also significantly related to stress appraisal, suggesting that individuals who are less

emotionally stabile perceive events in their lives to be more stressful than individuals with greater stability.

Unlike the neuroticism research, the relationship between extraversion and stress appraisal remains uncertain, even with a number of studies conducted utilizing several different measures across a variety of populations. To date, only one study (Mills & Huebner, 1998) reported a significant relationship between these variables. After reviewing the literature in this area, even the direction of the relationships approaching significance remains vague. Some studies found a negative relationship between extraversion and stress appraisal (Dreary et al., 1996; Jelinek & Morf, 1995; Mills & Huebner, 1998; Talbert, Braswell, Albrecht, & Hyer, 1993), whereas others reported positive correlations (Dorn & Matthews, 1992; Shewchuk et al., 1999). No apparent differences were noted in the studies by measure, age, or gender.

The results for openness to experience are also inconclusive, although most of the studies (Dreary et al., 1996; Jelinek & Morf, 1995; Mills & Heubner, 1998; Shewchuk et al., 1999) suggest that individuals who are more open to experience are also more likely to report to higher levels of stress. Perhaps these individuals are more in touch with their inner feelings and are more willing to report them on a self-report questionnaire. The data on agreeableness is less vague than that on openness, with only one study reporting a positive correlation (Dreary et al., 1996). The remainders suggest that agreeable individuals generally report less stress in their lives (Mills & Heubner, 1998; Shekchuk et al., 1999). Finally, only one study utilizing a sample of combat veterans (Talbert et al., 1993) contradicted the general finding that conscientious individuals report less subject stress (Mills & Heubner, 1998; Shekchuk et al., 1999).

Personality and Psychopathology

Perhaps the largest body of literature concerning these three factors focuses on the relationship between personality and psychopathology. Research addressing this relationship in adolescents is beginning to emerge, although further investigation is necessary to delineate specific personality traits and their role in developmental psychopathology. While the American Psychiatric Association (APA; 1994) implies that personality traits are less stable in adolescence than in adulthood, research on childhood temperament suggests greater stability in extreme temperaments between early adolescence and adulthood than previously expected (Maziade, Cote, Bernier, & Boutin, 1989). Nevertheless, APA has identified a number of patterns of personality that indicate interpersonal adjustment difficulties. However, the diagnosis of Axis II disorders in adolescence is still viewed as rare (Rapoport & Ismond, 1996).

While personality research has focused on a number of personality traits, constructs, and dimensions, a recent movement toward the evaluation of a five-factor model of personality, or the Big Five, is notable in the literature. Evidence for a five-factor structure of personality was first demonstrated in the research of Tupes and Christal (1961). Working with United States Air Force personnel, they repeatedly noted a recurrent pattern of a five-factor structure when numerous indices of personality were reduced through factor analysis. This pattern remained regardless of the traits measured. Initially identified by Tupes and Christal as emotional stability, surgency, culture, agreeableness, and dependability, Costa and McCrae (1989) continued work in this developing area and established the Big Five personality factors notable in contemporary

literature, including neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness.

Neuroticism is the most pervasive of the personality dimensions and is contrasted with adjustment and emotional stability. There is a general tendency for neurotics to experience intense negative affect such as fear, sadness, anger, and guilt. Costa and McCrae (1992) argue that these individuals are far more likely to be susceptible to psychological distress. Like neuroticism, the second dimension, extraversion, was borrowed from Eysenck's (1947) work with personality. Extraverts are sociable, prefer to be in large groups, act more assertive, and are generally more talkative. They tend to be upbeat and optimistic. Eaves, Eysenck, and Martin (1989) argue that the orthogonal dimensions of neuroticism and extraversion are pervasive across all cultures. Watson and Tellegen (1985) have offered support to this claim. They maintain the existence of a close relationship between mood and personality, and a detailed review of mood questionnaires reveals two orthogonal dimensions of positive affect and negative affect. If mood and personality are so closely related, then it should follow that there are two dimensions of personality involving susceptibility to positive affect (extraversion) and susceptibility to negative affect (neuroticism).

Openness to experience is the third of the Big Five dimensions. Individuals high in this personality dimension have active imaginations, possess aesthetic sensitivity, are attentive to their inner feelings, prefer variety, are intellectually curious, and are independent of judgment. Costa and McCrae (1992) note that alternative formulations have referred to this dimension as intellect. Glisky and colleagues (1991) suggest that openness to experience is not actually a single construct, but rather separate constructs

represented by the tendency to enter unusual states of attentional awareness, heightened curiosity, and a propensity to endorse politically liberal views. Conwell and colleagues (1996) argue that individuals low in openness to experience are at a greater risk for suicide due to affective dampening, cognitive certainty, diminished behavioral repertoire, and a rigidly defined self-concept. These aspects together decrease one's capacity to adapt both to loss and the expectable age-associated changes in role, health, and function that accumulates over time. Agreeableness is a dimension of interpersonal tendencies. These individuals are altruistic, sympathetic, helpful, and are often socially preferred and healthier. Conscientiousness taps one's ability to manage their desires and impulses, a common focus in psychodynamic theory (Malan, 1995). Self-control also refers to planning, organizing, and carrying out tasks. Individuals who are capable of maintaining self-control and organization are considered to be conscientious (Costa & McCrae, 1992). Child and adolescent research on conscientiousness generally describes the negative pole of this dimension, impulsivity (e.g., Daderman, Wirsen-Meurling, & Hallman, 2001; Harmon-Jones, Barratt, & Wigg, 1997).

Adolescent psychopathology can be evaluated within clinical syndromes of internalizing and externalizing problems (Achenbach, 1991). The term internalizing describes a broad range of co-occurring problems that mainly involve inner distress, whereas externalizing problems mainly involve conflicts with others and with social mores (Achenbach, 1966). Internalizing problems include anxiety, depression, somatic complaints, and social withdrawal. Externalizing problems include aggressive behaviors, delinquency, and general conduct-related problems (Achenbach & McConaughy, 1997). Achenbach's (1991) adolescent self-report measure, the Youth Self-Report (YSR),

identifies an additional factor of Total Problems. It includes both internalizing and externalizing syndromes, as well as syndromes that are not classified as internalizing or externalizing, such as attentional problems, social problems, and thought problems. The Total Problems scale may be viewed as a measure of overall symptomatology and general dysfunction.

Research is beginning to examine the relationship between the Big Five personality factors, measured both within the five-factor model and independently, and internalizing and externalizing problems. Neuroticism has received the most attention, and has been found to predict internalizing problems in clinically-referred children and adolescents (Greenspoon & Sasklofske, 2001; Huey & Weisz, 1997). Individuals high in neuroticism report more depressive symptoms (Carey & DiLalla, 1994; Marton et al., 1989), such as loneliness (Neto & Barros, 2000). Similarly, Cappeliez (1993) found a positive relationship between neuroticism and sociotropy, an identified vulnerability factor for depression (Beck, Epstein, & Harrison, 1983). The connection between anxiety and neuroticism dates back to the work of Sigmund Freud (1926), who described anxiety neuroses as either chronic mental states or transient attacks of anxiety. Modern research has distinguished separate constructs; however, the data continues to suggest adolescents high in neuroticism are more likely to experience trait anxiety (Canals, Marti-Henneberg, Fernandez-Ballert, Cliville, & Domenech, 1992), social anxiety (Furnham & Gunter, 1983), nonverbal expressions of anxiety (Gilbert, 1991), and comorbid anxiety and depression (Del Barrio, Moreno-Rosset, Lopez-Martinez, & Olmedo, 1997; Ehrler, Evans, & McGhee, 1999). In addition to expressed internalizing problems, research has found neurotic adolescents more likely to be conduct-disordered (Kirkcaldy &

Mooshage, 1993), engaging in criminal behavior (Addad & Leslau, 1990) and delinquent acts that did not involve contact with a victim (Bijleveld, Bakker, & Hendriks, 2000).

While there exists a positive relationship between neuroticism and both internalizing and externalizing problems, research on extraversion suggests a negative relationship with internalizing problems and a positive relationship with externalizing problems. Low extraversion, or introversion, is correlated with depression (Del Barrio et al., 1997; Marton & Kutcher, 1995), shyness (Lawrence & Bennett, 1992), and social anxiety (Furnham & Gunter, 1983) in adolescents, and phobic disorders (Bienvenu et al., 2001) and anorexia nervosa (Stonehill & Crisp, 1977) in adults. Skodol (1998) reported that individuals high in extraversion typically show resilience to internalizing problems, such as anxiety and depression. Additionally, high extraversion is correlated with externalizing problems (Huey & Weisz, 1997), specifically juvenile delinquency (Daderman et al., 2001) and offending behaviors (Aleixo & Norris, 2000). Jang, Livesley, & Vernon (1999) factor analyzed two measures of personality and found extraversion to load on a factor describing antisocial behavior, supporting Eysenck's (1960) learning theory of socialized behavior. Cowen and colleagues (1997) contradicted this finding with evidence indicating lower delinquency in extroverted adolescents.

Personality dimensions of neuroticism and extraversion have been investigated since Eysenck (1947) proposed a two-factor model over 60 years ago. Openness to experience, agreeableness, and conscientiousness are relatively new constructs in personality theory and have, therefore, emerged as "hot topics" in the last decade. However, their relationship with psychopathology continues to develop. Openness to experience is the least understood factor of the Big Five model. Research suggests that

children and adolescents low in openness are more likely to exhibit conduct problems (Ehrler et al., 1999), and females low in general openness are more physically aggressive than those high in openness (Wyrick, Gentry, & Shows, 1977). The relationship with internalizing problems is unclear. When the complete factor is considered, research suggests individuals low in openness are more vulnerable to depression (Cappeliez, 1993) and more likely to complete suicide (Duberstein, 2001). However, Costa and McCrae (1992) have reduced the openness factor to six subfactors, or facets. When considered independently, individuals high in openness to fantasy, aesthetics, and feelings are more likely to be depressed (Carrillo, Rojo, Sanchez, & Avia, 2001; Wolfenstein & Trull, 1997).

Research investigating the relationship between agreeableness and psychopathology is limited, particularly with respect to internalizing problems. Lingjaerde, Foreland, and Engvik (2001) found less agreeable adults to be more susceptible to Seasonal Affective Disorder. Newcomb (1990) argues that less agreeable individuals may be at risk to internalizing problems due to their lack of social support. Huey and Weisz (1997) reported a negative correlation between agreeableness and externalizing problems in clinically-referred children and adolescents. Low agreeableness has been identified in severely conduct-disordered children (Ehrler et al., 1999), particularly males (Daderman, 1999). Less agreeable adolescents exhibit more behavioral aggression (Martin, Watson, & Wan, 2000) and self-reported general delinquency (Heaven, 1996).

Conscientiousness is a term that has been more commonly examined in the adult literature. The negative pole of this personality factor, impulsivity, is more frequently

explored in the child and adolescent literature. High conscientiousness is correlated with vulnerability to depression in older adolescents (Cappeliez, 1993) and adults (Lingjaerde et al., 2001), while low impulsivity is correlated with internalizing problems in children ages 4-8 years (Eisenberg et al., 2001). Low conscientiousness is associated with conduct problems in children (Ehrler et al., 1999) and self-reported delinquency in middle and late adolescents (Heaven, 1996). High impulsiveness is related to severe conduct problems (Huey & Weisz, 1997) and antisocial behaviors in adolescents (Luengo, Carrillo de la Pena, Otero, & Romero, 1994). Impulsive children and adolescents are more aggressive (Harmon-Jones et al., 1997) and a greater risk to harming themselves (Brent et al., 1994; Stanford, Greve, Boudreaux, & Mathias, 1996). They are also more likely to commit crimes (Bijleveld et al., 2000; Curtiss, Feczko, & Marohn, 1979; Daderman et al., 2001; Oas, 1985), particularly impulsive males (Colder & Stice, 1998; Rigby, Mak, & Slee, 1989).

The data on the Big Five personality factors and internalizing and externalizing problems generally support Trull and Sher's (1994) assessment of the relationship between the five-factor model and Axis I disorders in a nonclinical adult sample. They found anxiety disorders to be related to high neuroticism, low extraversion, high openness, low agreeableness, and low conscientiousness. Major depressive disorder was found in neurotics, introverts, and less conscientious individuals. The previously described literature suggests internalizing problems to be more likely in children and adolescents with high neuroticism, low extraversion, low agreeableness, and high conscientiousness. The data on openness remains vague. Children and adolescents with externalizing problems score high on neuroticism and extraversion, and low on openness,

agreeableness, and conscientiousness. This is similar to the psychopathic personality (Trull & Sher, 1994).

Achenbach's (1991) YSR Total Problems scale combines internalizing and externalizing problems, as well as additional thought, attention, and social problems. It is viewed as a general measure of dysfunction within preadolescent and adolescent populations (Achenbach & McConaughy, 1997). While neuroticism predicts dysfunction in adult populations (Drossman et al., 2000; Lyness, Duberstein, King, Cox, & Caine, 1998; Noyes et al., 2001), research has failed to address the relationship between the five-factor model and global dysfunction in adolescents. Perhaps the most promising literature surrounds the emerging trend toward increased diagnoses of Axis II personality disorders in adolescents. While it remains uncommom (APA, 1994), research on adolescents has found the likelihood of elevated personality disorder dimension scores increased as a function of the number of Axis I disorders, suggesting personality disorders are correlated with greater pathology (Lewinsohn, Rohde, Seeley, & Klein, 1997). Additional evidence indicates that the severity of personality disorder symptoms are associated with increased risk of functional impairment and psychological distress at follow-up (Bernstein et al., 1993; Marton, Golombek, Stein, & Korenblum, 1987). Research on the stability of personality disorders diagnosed in childhood and adolescence holds mixed results, although Antisocial Personality Disorder demonstrates evidence of stability. Robbins (1978) found childhood conduct disturbance and pervasive social impairment in adults diagnosed with Antisocial Personality Disorder. Additionally, a formal diagnosis of Antisocial Personality Disorder requires premorbid conduct-related problems associated with Conduct Disorder in childhood (APA, 1994).

Research on the relationship between the five-factor model of personality and Axis II personality disorders in adults offers hypotheses concerning adolescents and total problem behaviors. The DSM-III-R personality disorders have been examined by several researchers (Costa & McCrae, 1990; Trull, 1992; Wiggins & Pincus, 1989). Results suggest high neuroticism in all personality disorders, with the exception of dramatic characterology, such as Narcissistic and Histrionic Personality Disorder. Extraversion is high in Cluster B (i.e., dramatic, emotional, and erratic problems) personality disorders but low in Cluster A (i.e., odd and eccentric) and Cluster C (i.e., anxious and fearful) personality disorders. Openness to experience demonstrated a positive correlation with Histrionic and Antisocial Personality Disorder, although an understanding behind this correlation remains unclear (Costa & McCrae, 1990). Agreeableness was negatively correlated with all personality disorders, except Dependent Personality Disorder, a condition in which characterological traits are dependent on the inability to disagree with others, even when things are believed to be wrong, due to a fear of loss of support or approval (APA, 1994). Finally, conscientiousness is negatively correlated with all personality disorders with the exception of Obsessive-Compulsive and Schizoid Personality Disorders. Assuming some stability of characterological traits through adolescence and into adulthood, the present data suggests that adolescents with the most significant problems will be high in neuroticism and low in agreeableness. The remaining three dimensions of personality are less clear, although it can be expected that low extraversion will be correlated with total problems, except in the case of individuals with extreme acting out problems. Impulsive adolescents are at greater risk for psychopathology (Vitacco & Rogers, 2001); therefore, one can expect low

conscientiousness to be related to total problems. Current research on openness to experience remains inconclusive.

The purpose of the present study is to assess a two-part mediational model examining the diathesis-stress relationship between 1) life event stress, stress appraisal, and psychopathology, and 2) stress appraisal, the five-factor model of personality, and psychopathology. Lazarus and Folkman (1984) argue that every event must be appraised with respect to one's regard to personal well-being prior to coping and subsequent outcome. Others (Elkind, 1981; Frydenberg & Lewis, 1993) maintain that perceptions of potentially stressful events are just as important as the objective stressor itself. Therefore, it is expected that stress appraisal will mediate the relationship between life event stress and psychopathology. If the first mediational model holds true, then one must consider the individual elements that drive the appraisal process. Lazarus and Folkman have implied that the appraisal process is cognitive, and others (Young, 1990; Young & Gluhoski, 1998) have argued that cognitive schemas predict reliable personality dimensions, thus suggesting that personality traits play some role in determining the impact of stress appraisal on psychopathology. Following this argument, a second model will examine the role of the five-factor model of personality as a mediator of the stress appraisal-psychopathology relationship. Specific personality traits probably established in early and middle adolescence are expected to influence one's perception of stressful events and, therefore, influence resilience and vulnerability to current psychopathology.

Analytic Plan

Diathesis-stress models represent the interaction of two independent variables (IVs) on a single dependent variable (DV). The second model, described above, examines the role of personality as a diathesis affecting the relationship between stress appraisal (IV) and psychopathology (DV); therefore, a mediational model was used to estimate the effect. To assess mediational pathways, four conditions must be met (Baron & Kenny, 1986): 1) the IV must affect the mediator in the first regression equation, 2) the IV must be shown to affect the DV in the second regression equation, 3) the mediator must affect the DV in the third regression equation, and 4) the effect of the IV on the DV in the third regression equation must be significantly less than the effect of the IV on the DV in the second regression equation. To determine a significant reduction in effect, a 95% confidence interval was established based on the unstandardized beta coefficient and standard error in the second regression equation (Cohen & Cohen, 1983). Mediation existed when the unstandardized beta coefficient of the IV in the third equation fell below the 95% confidence interval, or two standard deviations.

In the first mediational model, life event stress served as the IV, psychopathology served as the DV, and stress appraisal served as a single mediator. Three models were established with internalizing problems, externalizing problems, and total problems serving as separate DVs measuring psychopathology. In the second mediational model, stress appraisal served as the IV, psychopathology served as the DV, and the Big Five personality factors served as mediators. Again, three models were established measuring psychopathology as internalizing, externalizing, and total problems. While each factor of the five-factor model is described as unique contributors to overall personality (Costa &

McCrae, 1992), in practice they fail to represent independent, orthogonal dimensions. Therefore, moderating interactions are theoretically possible and were entered into each regression equation along with the five basic dimensions of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. All five personality factors were entered together, as this method best represents the five-factor model and an overall estimate of individual personality. Non-significant ($p < .05$) two- and three-way interactions were removed until final regression models were achieved. Analytic models based on structural equation modeling were a possible alternative (Holmbeck, 1997); however, a small sample size precluded the use of such techniques.

CHAPTER II

METHOD

Participants

A southeastern public school county research office was approached concerning participation in the study. After gaining approval from the county research office, individual middle and high school principals were solicited for their participation. The project was described as a study designed to examine differences in preadolescent and adolescent responses to a number of daily and life stressors. Principals who approved the study recommended specific classes for data collection. Almost exclusively physical education, wellness, and freshman orientation classes were used. These classes represented a normal distribution of students attending the requested grades. The principal investigator attended each class, described the nature of the research and the amount of time required, and distributed assent and consent forms to all students in the identified classrooms. It was emphasized that failure to participate would not influence the students' grade in that course. Approximately 4,200 assent and consent forms were distributed. Only those students who returned signed assent and consent forms were allowed to participate in the study. Classroom teachers maintained a list of participating students.

The participants were 598 students. Seventeen participants were excluding for providing obviously unreliable data (e.g., circling "always true" on most or all Youth Self-Report items, etc.), resulting in a final participant pool of 581 preadolescents and

adolescents between the ages of 11 and 16 years (mean age = 14.34 years). Participants attended 6th (10.8%), 7th (20.7%), 8th (23.9%), 9th (27.4%), or 10th (17.25) grade at one of eight public middle and high schools in a medium-sized southeastern city and surrounding suburban and rural communities. Selected middle and high schools represent the full range of socioeconomic status, and efforts were made to recruit middle schools and high schools from the same communities, thereby reducing age effects due to community variables. The sample was primarily female (54.4%) and Caucasian (91.9%) with 69.2% of participants coming from homes in which their parents remained married and living together. The participants averaged 1.56 siblings. See Table 1 for a description of all participants.

Measures

Adolescent Big Five Inventory (ABFI; Tatum, 2000). The Adolescent Big Five Inventory is an 85-item questionnaire designed to measure the Big Five personality factors (neuroticism, extraversion, openness, agreeableness, and conscientiousness) in adolescents between the ages of 11 and 18. Participants rate statements about themselves on a 5-point scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The five ABFI scales have demonstrated strong internal consistency reliabilities ranging between .78 and .85. In the present study, internal consistency reliabilities were .84 for neuroticism, .87 for extraversion, .77 for openness, .82 for agreeableness, and .85 for conscientiousness. The ABFI also has strong relationships with the NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1989), with correlations from .60 to .83.

Perceived Stress Scale (PSS; Cohen & Williamson, 1988). The Perceived Stress Scale is a 10-item self-report measure designed to assess one's thoughts and feelings of control and predictability. The PSS also has a 14-item version and a 4-item version; however, the 10-item version demonstrates the highest reliability ($\alpha = .78$). The PSS has been modified to reflect thoughts and feelings in the past six months.

Stress Test for Children (STC; Elkind, 1981). The Stress Test for Children is a 43-item self-report measure of stressful life events. Children are to endorse events that have occurred in the past six months, and each event has a corresponding score. A total score is calculated from the endorsed items. Scores between 150 and 300 suggest that there is a better than average chance of experiencing symptoms of stress. Scores over 300 suggest a severe change in health and/or behavioral problems. Due to the nature of the scale, a coefficient alpha is not applicable.

Youth Self-Report (YSR; Achenbach, 1991). The Youth Self-Report is a 112-item inventory designed to assess adolescents' behaviors, thoughts, and feelings over the past six months. The YSR is normed for adolescents between the ages of 11 and 18. Participants rate statements about themselves measured on a 3-point scale labeled as 0 (Not True), 1 (Somewhat or Sometimes True), and 2 (Very True or Often True). Items are arranged into two broad-banded categories of Internalizing and Externalizing Problems and further divided into several narrow-banded subscales: Aggressive Behavior, Anxious/Depressed, Attention Problems, Delinquent Behavior, Social Problems, Somatic Complaints, Thought Problems, and Withdrawn. The psychometric

properties of the YSR are published in the scale manual and range from adequate to excellent.

Procedure

Participants completed a battery of self-report measures in their classrooms, including a demographics questionnaire, Adolescent Big Five Inventory (ABFI; Tatum, 2000), Perceived Stress Scale (PSS; Cohen & Williamson, 1988), Stress Test for Children (STC; Elkind, 1981), and Youth Self-Report (YSR; Achenbach, 1991). Undergraduate research assistants trained in the nature of each questionnaire by the principal investigator supervised the administration of the self-report measures. The research assistants were available to answer any questions concerning the meaning of a particular item, although they were instructed to avoid providing too much information and contaminating items. After completing the questionnaires, participants placed them in a folder located at the front of the classroom. The last participant to complete the battery sealed the folder. The research assistants did not touch the folder until the final participant sealed it. All participants were thanked for their participation and instructed to contact the principal investigator via telephone or mail should they have any additional questions concerning the study. Once the folders were returned to the research lab, the principal investigator assigned identification numbers based on the school and teacher. Individual identification numbers do not reveal the identity of any one participant.

CHAPTER III

RESULTS

Stress Appraisal Mediating Prediction of Psychopathology From Life Event Stress

Associations Between Life Events and Stress Appraisal. After reviewing the initial data with a histogram, life event stress appeared skewed right suggesting a typical log normal pattern. Therefore, the log of life event stress was created to provide a normal distribution. Condition 1 for mediation (Baron & Kenny, 1986) requires regressing the mediator on the IV. Life event stress was positively associated with stress appraisal, $\beta = .29$, $F(1, 579) = 54.89$, $p < .001$.

Associations Between Life Event Stress and Psychopathology. Condition 2 for mediation requires regressing the DV on the IV. Life event stress was positively associated with total problems, $\beta = .41$, $F(1, 579) = 118.84$, $p < .001$; internalizing problems, $\beta = .38$, $F(1, 579) = 100.08$, $p < .001$; and externalizing problems, $\beta = .36$, $F(1, 579) = 87.61$, $p < .001$.

Mediational Analyses. To be included as a potential mediational pathway, Conditions 1 and 2, presented above, must be satisfied and the mediator must affect the DV when simultaneously regressed with the IV. Mediational pathways for total, internalizing, and externalizing problems are presented in Figure A-1. Table A-2 represents the regression results for the prediction of adolescent psychopathology from life event stress with stress appraisal as a mediator. Total problems, internalizing

problems, and externalizing problems served as separate DVs for each mediational model. The inclusion of stress appraisal within each model significantly increased the amount of variance accounted for by the regression equations ($\Delta R^2 = .24$, $p < .01$ for total problems; $\Delta R^2 = .26$, $p < .01$ for internalizing problems; $\Delta R^2 = .15$, $p < .01$ for externalizing problems). To test for a significant increase in the effect of life event stress on psychopathology with stress appraisal mediating the relationship, a 95% confidence interval was established based on the unstandardized beta coefficient and standard error of the IV in Condition 2. If the unstandardized beta coefficient of the IV in the mediational model was less than the 95% confidence interval ($B = 6.08$ for total problems, $B = 5.71$ for internalizing problems, $B = 4.74$ for externalizing problems), then the mediator significantly influenced the IV-DV relationship established in Condition 2. Stress appraisal significantly reduced the effect of life event stress on total problems ($B = 4.68$, $p < .05$), internalizing problems ($B = 4.20$, $p < .05$), and externalizing problems ($B = 4.04$, $p < .05$) and, therefore, served as a functional mediator.

Personality Mediating Prediction of Psychopathology From Stress Appraisal

Associations Between Stress Appraisal and Personality. Since stress appraisal was shown to mediate the relationship between life event stress and psychopathology, one must consider the elements that drive the appraisal process. The second mediational model examines the five-factor model of personality as a mediator of the stress appraisal-psychopathology relationship. Intercorrelations between stress appraisal, personality, and psychopathology are presented in Table A-3. Associations between stress appraisal and

the Big Five personality factors were assessed with Pearson correlation coefficients, rather than multiple regression. The predictive utility of stress appraisal for the five-factor model of personality could not be independently achieved, and a significant relationship between the IV and mediators was enough to satisfy Condition 1 for mediation (Baron & Kenny, 1986). Stress appraisal was significantly related to each of the five personality factors, and all relationships were negative, with the exception of neuroticism. High neuroticism was significantly related to high stress appraisal.

Associations Between Stress Appraisal and Psychopathology. To satisfy Condition 2 for mediation, psychopathology was regressed on stress appraisal. Stress appraisal was positively associated with total problems, $\beta = .59$, $F(1, 579) = 315.14$, $p < .001$; internalizing problems, $\beta = .60$, $F(1, 579) = 325.07$, $p < .001$; and externalizing problems, $\beta = .47$, $F(1, 579) = 167.87$, $p < .001$.

Mediational Analysis. Conditions 1 and 2 (Baron & Kenny, 1986) in the current model were successfully met. Mediational pathways with personality serving as a mediator between stress appraisal and psychopathology are presented in Figure A-2. Individual pathways are represented for total, internalizing, and externalizing problems. Table A-4 shows the regression results for the prediction of adolescent psychopathology from stress appraisal with the five-factor model of personality serving as a mediator. To account for a complete representation of personality, all five personality factors and potential two- and three-way moderating interactions were entered into each equation simultaneously and nonsignificant interaction blocks were removed until the final model was achieved (see *Analytic Plan*). Total problems, internalizing problems, and

externalizing problems served as separate DVs for each mediational model. The inclusion of the Big Five personality factors within each model significantly increased the amount of variance accounted for by the regression equations ($\Delta R^2 = .21, p < .001$ for total problems; $\Delta R^2 = .19, p < .001$ for internalizing problems; $\Delta R^2 = .25, p < .001$ for externalizing problems). Again, a 95% confidence interval was constructed to assess a significant change in the relationship between stress appraisal and psychopathology from Condition 2 and the mediational model. Personality significantly reduced the effect of stress appraisal on total problems ($B = 0.34, p < .05$), internalizing problems ($B = 0.40, p < .05$), and externalizing problems ($B = 0.24, p < .05$) and, therefore, served as a successful mediator.

Examining the significance and directionality of the standardized beta weights within each mediational regression model can assess the role of the individual elements of personality as mediators. The relationship between stress appraisal and total problems was mediated by high neuroticism ($\beta = .51, p < .01$), low extraversion ($\beta = -.51, p < .01$), low openness ($\beta = -.40, p < .01$), low agreeableness ($\beta = -.15, p < .01$), and low conscientiousness ($\beta = -.08, p < .05$). In addition, a significant interaction between extraversion and openness ($\beta = .81, p < .01$) existed, thus moderating the relationship between stress appraisal and total problems. The relationship between stress appraisal and internalizing problems was mediated by high neuroticism ($\beta = .53, p < .01$), low extraversion ($\beta = -.60, p < .01$), low openness ($\beta = -.32, p < .05$), low agreeableness ($\beta = -.09, p < .05$), and high conscientiousness ($\beta = .07, p < .05$). Again, a significant interaction between extraversion and openness ($\beta = .75, p < .01$) existed. The relationship

between stress appraisal and externalizing problems was mediated by high neuroticism ($\beta = .33, p < .01$), high extraversion ($\beta = .19, p < .01$), low agreeableness ($\beta = -.26, p < .01$), and low conscientiousness ($\beta = -.23, p < .01$). Openness failed to account for significant variance in this model ($\beta = -.06$, n.s.), and no interactions existed.

CHAPTER IV

DISCUSSION

The present study assessed a two-part mediational model examining the diathesis-stress relationship between 1) life event stress, stress appraisal, and psychopathology, and 2) stress appraisal, the five-factor model of personality, and psychopathology. Results indicated that stress appraisal mediates the relationship between life event stress and three dimensions of psychopathology: internalizing problems, externalizing problems, and total problems. These findings support the basic conclusion that one's interpretation of life events is influential in the adaptive process. Furthermore, it emphasizes the importance of primary appraisal (Lazarus & Folkman, 1984) in this process. While these findings are useful in understanding pathways by which adjustment problems develop from stressful life events, they fail to address the individual elements that drive the appraisal process. Why might two adolescents experience the exact same traumatic event, but only one develops a depressive syndrome, while the other adapts well and soon returns to normalcy? Some would argue for an inherited genetic predisposition (Andreasen, 1995; Torgersen, 1993; True, Rice, Eisen, & Heath, 1993), while others would suggest that environmental factors have driven the disposition (Mathijssen et al., 1999). In either case, personality traits are the products (Epstein & O'Brien, 1985; Rende, Plomin, Reiss, & Hetherington, 1993), and these traits might play some role in determining the impact of stress appraisal on psychopathology.

The second model examined the mediating influence of the five-factor model of personality on the stress-psychopathology relationship within a diathesis-stress model. Results indicated that the five-factor model of personality mediates the relationship between stress appraisal and total, internalizing, and externalizing problems. Furthermore, high neuroticism, low extraversion, low openness, low agreeableness, and low conscientiousness mediated the relationship between stress appraisal and total problems. These findings extend adult research on global dysfunction and the predictive utility of neuroticism (Drossman et al., 2000; Lyness et al., 1998; Noyes et al., 2001) into adolescence. Trull's (1992) work on the five-factor model of personality and Axis II disorders argues for increased functional impairment in individuals high in neuroticism and low in agreeableness, while Vitacco and Rogers (2001) found impulsive adolescents at greater risk for psychopathology. Current findings lend support to these conclusions, suggesting the stability of core traits well into early and middle adolescence. Moreover, an interaction between extraversion and openness moderated stress appraisal, indicating that introverted individuals who are less open are more likely to develop symptoms associated with various psychopathologies when perceived to be under stress. Costa and McCrae (1992) report that individuals scoring low in openness are generally less attentive to their inner feelings, while introverts are less sociable and more pessimistic. Perhaps global dysfunction in socially isolative individuals is compounded by one's inability to attend to and manage overwhelming affective states, thereby generating a struggle between competing traits and a state of chronic isolation.

The relationship between stress appraisal and internalizing problems was mediated by high neuroticism, low extraversion, low openness, low agreeableness, and

high conscientiousness. These findings support existing literature on adolescent anxiety and depression and neuroticism (Carey & DiLalla, 1994; Del Barrio et al., 1997), introversion (Marton & Kutcher, 1995), openness (Cappeliez, 1993), and impulsivity (Eisenberg et al., 2001), as well as adult literature on internalizing problems and agreeableness (Lingjaerde et al., 2001). Again, an interaction between extraversion and openness moderated stress appraisal, suggesting a lack of resourcefulness with which to manage affect associated with a general tendency toward introversion predisposes one to internalizing problems when perceived to be under overwhelming stress. While it is no surprise that high neuroticism, low extraversion, low openness, and low agreeableness mediate the relationship between stress appraisal and internalizing problems, high conscientiousness as a mediator requires further discussion. Research has found conscientiousness to be associated with thoughtful cognitive processes (Spector, Schneider, Vance, & Hezlett, 2000; Verplanken & Herbadi, 2001). Aaron Beck's cognitive theories of depression (Beck et al., 1979) and anxiety (Beck & Emery, 1985) implicate distortion in one's cognitive processes as the root of psychopathology. Accordingly, depressed and anxious individuals engage in excessive thinking, often at the expense of functional activity. Following this argument, one might expect depressed and anxious individuals to be highly conscientious and less geared toward impulsive activity.

Stress appraisal and externalizing problems was mediated by high neuroticism, high extraversion, low agreeableness, and low conscientiousness. These findings support previous research, suggesting conduct problems and juvenile delinquency is related to traits of neuroticism (Addad & Leslau, 1990; Kirkcaldy & Mooshage, 1993),

extraversion (Daderman et al., 2001; Huey & Weisz, 1997), low agreeableness (Ehrler et al., 1999; Martin et al., 2000), and impulsivity (Harmon-Jones et al., 1997; Luengo et al., 1994). The openness trait failed to mediate the relationship between stress appraisal and externalizing problems. Among adolescents with high externalizing problems, this trait is equally distributed. Perhaps some adolescents with conduct problems are more susceptible to negative peer influence (Vitaro, Tremblay, & Bukowski, 2001), whereas others hold more rigid beliefs and demonstrate more callousness in their behavioral expression (Barry et al., 2000; Frick & Ellis, 1999; Silverthorn, Frick, & Reynolds, 2001).

High neuroticism and low agreeableness remained consistent across all domains of psychopathology. In fact, this data set produced a shared variance of 26% between these two traits. While Costa and McCrae (1992) maintain that each factor represents a unique contribution to one's underlying personality structure, the present data question the merits of this claim. Perhaps inconsistencies are due to differences among measurement instruments. Nevertheless, these findings support Trull's (1992) research indicating that high neuroticism and low agreeableness are the only consistent extremes of the five personality factors that remain stable across most Axis II personality disorders. Not surprisingly, these two traits have the strongest relationship with stress appraisal and all domains of psychopathology (see Table 3). Perhaps traits of neuroticism and disagreeableness combine to form a psychopathology core that is highly influenced by stress and rigidly maintained thereafter.

Clinical Implications

The influential role of personality traits on the relationship between how one perceives life events and subsequent adjustment presents important implications for clinical practice. Understanding that one's trait composition drives perceptions of experience can serve as meaningful data in therapy. Learning the significance of one's own contribution to psychopathology requires a level of responsibility and ownership. While some therapy clients, adolescents and parents, may not directly facilitate the development of new stressors and may argue they can do nothing to change trait composition, psychodynamically-focused therapies (Kernberg, 1984; Malan, 1995; Strupp & Binder, 1984) have addressed methods of characterological change for years. However, only minimal empirical evidence exists supporting long-term characterological change proposed by most psychodynamically-focused therapies (Strupp, 1987, 1989).

Some have argued that developing insight into one's own contribution provides meaningful information from which change can be monitored (Adler, 1930; Sullivan, 1953). But the question remains: does giving you this knowledge offer you the opportunity for choice? If we assume that personality traits become more stable into adolescence and adulthood (McCrae, 2001), then one must consider these traits to be indelible properties of individual identity. While identity may develop throughout the lifespan (Erikson, 1980; Marcia, Waterman, Matteson, Archer, & Orlofsky, 1993), personality sits at the core of one's relationships with the outside world. Perhaps significant characterological change is an unreasonable goal in therapy, and the focus should turn to the development of tactics to help moderate trait expression in individuals and families. A discussion of traits within family therapy may yield similarities across

family members and produce a setting within which parents can draw on their own experiences to help assist their children and adolescents manage expression of traits within interpersonal contexts.

Current results also offer insight into the area of triage and predictive outcome. A short measure of personality can provide valuable information in the prediction of internalizing and externalizing problems in relatively normal adolescents. When multiple individuals are forced to manage the effects of significant trauma, one can expect that those most in need of clinical intervention would be those individuals whose traits are most pronounced. For example, an adolescent scoring high in neuroticism, high in extraversion, low in agreeableness, and low in conscientiousness would be at risk for developing conduct-related problems following the event. Similar scores on neuroticism and agreeableness, but low scores on extraversion and high scores on conscientiousness would indicate a tendency toward depressed mood or anxiety symptoms. Results from the present study also suggest potential protective factors, such that lower scores on neuroticism and higher scores on agreeableness might provide necessary affective and cognitive resources with which to manage stress. However, further research on extreme scores and ranges of normality within adolescent populations is necessary to solidify this argument. Nevertheless, current results may provide useful information on the type and extent of clinical resources needed to address individual differences in adolescents' response to traumatic experiences.

Limitations and Future Directions

The present study provides an understanding of the role of personality as a mediator of the stress-psychopathology relationship in normal adolescents. While it can be assumed that some of the participants have previously received clinical services or are currently receiving these services, assessing the mediating role of personality within an identified clinic population may provide further information concerning extreme scores across the five personality factors and suggest cutoff points at which the stress-psychopathology relationship is most susceptible to trait influence. Additional research is also necessary in more ethnically diverse settings.

This study is limited by a number of factors that confound the exclusive use of self-report measures, most notably data reliability. While efforts were taken to discard participant responses that clearly were unreliable (e.g., circling "always true" on most or all YSR items, consistently circling one response on all ABFI items, using responses to create tree-like patterns, etc.), it is possible that some of the analyzed data reflected gross overexaggerations and underexaggerations. Secondly, an argument can be made for a sampling effect. A number of steps were required in order for students to participate in the study. One might argue that participants demonstrated a moderate level of maturity and responsibility simply by returning consent and assent forms.

The use of self-report measures of life events has been challenged as state dependent recall influenced by participants' mood states at the time of data collection (Bower, 1981). Future research focused on specific, observable events can control for this confounding variable while providing less subjective data from which trait influence can be prospectively examined. Finally, this study provides hypotheses for adjustment

outcomes associated with the experience of stress. Longitudinal research focused on developmental pathways of psychopathology based on predictions from trait composition can assess the stability of individual traits under periodic stress over time, as well as examine the predictive influence of traits and subsequent adjustment on a range of stressors.

Conclusion

The present study is the first to report the mediating effects of personality on the stress-psychopathology relationship in adolescence. Furthermore, it is one of the first studies to begin exploring the complete five-factor model of personality (Costa & McCrae, 1992) during the adolescent developmental period. Results indicated that some personality factors, most notably high neuroticism and low agreeableness, serve as diatheses for the development of internalizing and externalizing problems when one perceives themselves to be under significant stress. In fact, relationships between the five factors and stress appraisal emphasis the importance of traits in interpreting psychological threat and harm associated with specific life events. Current findings extend previous research with adult populations on the relationship between personality and general psychopathology into adolescence, lending support to arguments that central features of trait composition are stabilized long before adulthood.

Understanding the individual elements that drive appraisal and shape developmental pathways of psychopathology offers valuable information to the therapeutic process. While significant change in personality structure may not be reasonable expectations for adolescents in therapy, learning tactics by which pronounced

trait expression can be moderated may yield desired behavioral change. The present results also offer unique predictions for triage management when catastrophic events effect large groups of adolescents. Additional research on identified clinical populations and longitudinal research on the relationship between traits and developmental psychopathology are needed to generate a more specific understanding of trait contribution to perceptions of the psychosocial world and subsequent adjustment.

REFERENCES

REFERENCES

Achenbach, T. M. (1966). The classification of children's psychiatric symptoms: A factor-analytic study. *Psychological Monographs, 80*(No. 615).

Achenbach, T. M. (1991). *Manual for the Youth Self-Report and 1991 profile.* Burlington, University of Vermont Department of Psychiatry.

Achenbach, T. M., & McConaughy, S. H. (1997). *Empirically based assessment of child and adolescent psychopathology (2nd ed.)*. Thousand Oaks, CA: Sage Publications, Inc.

Addad, M., & Leslau, A. (1990). Immoral judgement, extraversion, neuroticism, and criminal behaviour. *International Journal of Offender Therapy and Comparative Criminology, 34*, 1-13.

Adler, A. (1930). *Guiding the child on the principles of individual psychology.* New York: Greenberg.

Aleixo, P. A., & Norris, C. E. (2000). Personality and moral reasoning in young offenders. *Personality and Individual Differences, 28*, 609-623.

American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.). Washington: Authors.

Andreasen, N. C. (1995). Posttraumatic stress disorder: Psychology, biology, and the Manichaean warfare between false dichotomies. *American Journal of Psychiatry, 152*, 963-965.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in

social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Barry, C. T., Frick, P. J., DeShazo, T. M., McCoy, M., Ellis, M., & Loney, B. R. (2000). The importance of callous-unemotional traits for extending the concept of psychopathy to children. *Journal of Abnormal Psychology, 109*, 335-340.

Bauwens, J., & Hourcade, J. J. (1992). School-based sources of stress among elementary and secondary at-risk students. *The School Counselor, 40*, 97-102.

Beck, A. T., & Emery, G. (1985). *Anxiety disorders and phobias: A cognitive perspective.* New York: Basic Books.

Beck, A. T., Epstein, N., & Harrison, R. (1983). Cognitions, attitudes and personality dimensions in depression. *British Journal of Cognitive Psychotherapy, 1*, 1-16.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression.* New York: Guilford Press.

Bernstein, D. P., Cohen, P., Velez, C. N., Schwab-Stone, M., Siever, L. J., & Shinsato, L. (1993). Prevalence and stability of the DSM-III-R personality disorders in a community-based survey of adolescents. *American Journal of Psychiatry, 150*, 1237-1243.

Bienvenu, O. J., Nestadt, G., Samuels, J. F., Costa, P. T., Howard, W. T., & Eaton, W. W. (2001). Phobic, panic, and major depressive disorders and the five-factor model of personality. *Journal of Nervous and Mental Disease, 189*, 154-161.

Bijleveld, C. C. J. H., Bakker, L., & Hendriks, J. (2000). Contact crimes in relation to neuroticism, impulsiveness, conscience formation and intelligence: An exploratory discriminant analysis in juvenile delinquents. *Psychology, Crime and*

Law, 4, 341-360.

Boland, A., & Cappeliez, P. (1997). Optimism and neuroticism as predictors of coping and adaptation in older women. *Personality and Individual Differences, 22*, 909-919.

Bower, G. H. (1981). Mood and memory. *American Psychologist, 36*, 129-148.

Brent, D. A., Johnson, B. A., Perper, J., Connolly, J., Bridge, J., Bartle, S. & Rather, C. (1994). Personality disorder, personality traits, impulsive violence, and completed suicide in adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 33*, 1080-1086.

Canals, J., Marti-Henneberg, C., Fernandez-Ballart, J., Cliville, R., & Domenech, E. (1992). Scores on the State-Trait Anxiety Inventory for Children in a longitudinal study of pubertal Spanish youth. *Psychological Reports, 71*, 503-512.

Cappeliez, P. (1993). The relationship between Beck's concepts of sociotropy and autonomy and the NEO-Personality Inventory. *British Journal of Clinical Psychology, 32*, 78-80.

Carey, G., & DiLalla, D. L. (1994). Personality and psychopathology: Genetic perspectives. *Journal of Abnormal Psychology, 103*, 32-43.

Carrillo, J. M., Rojo, N., Sanchez-Bernardos, M. L., & Avia, M. D. (2001). Openness to experience and depression. European Journal of Psychological Assessment, 17, 130-136.

Cohen, J., & Cohen, P. (1983). Applied multiple regression/correlation analysis for the *behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Cohen, S., & Williamson, G. M. (1988). Perceived stress in a probability sample of the

United States. In. S. Spacapan & S. Oskamp (Eds.). *The social psychology of health* (pp. 31-67). Thousand Oaks, CA: Sage.

Colder, C. R., & Stice, E. (1998). A longitudinal study of the interactive effects of impulsivity and anger on adolescent problem behavior. *Journal of Youth and Adolescence, 27*, 255-274.

Compas, B. E., Orosan, P. G., & Grant, K. E. (1993). Adolescent stress and coping: Implications for psychopathology during adolescence. *Journal of Adolescence, 16*, 331-349.

Conwell, Y., Duberstein, P. R., Cox, C., Herrmann, J. H., Forbes, N. T., & Caine, E. D. (1996). Relationship of Axis I diagnoses in victims of completed suicide: A psychological autopsy study. *American Journal of Psychiatry, 153*, 1001-1008.

Costa, P. T., & McCrae, R. R. (1989). *The NEO-PI/NEO-FFI manual supplement.* Odessa, FL: Psychological Assessment Resources, Inc.

Costa, P. T., & McCrae, R. R. (1990). Personality disorders and the five-factor model of personality. *Journal of Personality Disorders, 4*, 362-371.

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO PI-R).* Odessa, FL: Psychological Assessment Resources, Inc.

Cowen, E. L., Wyman, P. A., Work, W. C., Kim, J. Y., Fagan, D. B., & Magnus, K. B. (1997). Follow-up of young stress-affected and stress-resilient urban children. *Development and Psychopathology, 9*, 565-577.

Curtiss, G., Feczko, M. D., & Marohn, R. C. (1979). Rorschach differences in normal and delinquent White male adolescents: A discriminant function analysis. *Journal of Youth and Adolescence, 8*, 379-392.

Daderman, A. M. (1999). Differences between severely conduct-disordered juvenile males and normal juvenile males: The study of personality traits. *Personality and Individual Differences, 26*, 827-845.

Daderman, A. M., Wirsen-Meurling, A., & Hallman, J. (2001). Different personality patterns in non-socialized (juvenile delinquents) and socialized (air force pilot recruits) sensation seekers. *European Journal of Personality, 15*, 239-252.

Del Barrio, V., Moreno-Rosset, C., Lopez-Martinez, R., & Olmedo, M. (1997). Anxiety, depression and personality structure. *Personality and Individual Differences, 23*, 327-335.

Dohrenwend, B. P., & Dohrenwend, B. S. (1981). Socioenvironmental factors, stress, and psychopathology. *American Journal of Community Psychology, 9*, 128-164.

Dorn, L., & Matthews, G. (1992). Two further studies of personality and driver stress. *Personality and Individual Differences, 13*, 949-951.

Dreary, I. J., Blenkin, H., Agius, R. M., Endler, N. S., Zealley, H., & Wood, R. (1996). Models of job-related stress and personal achievement among consultant doctors. *British Journal of Psychology, 87*, 3-29.

Drossman, D. A., Leserman, J., Li, Z., Keefe, F., Hu, Y. J. B., & Toomey, T. C. (2000). Effects of coping on health outcome among women with gastrointestinal disorders. *Psychosomatic Medicine, 62*, 309-317.

Duberstein, P. R. (2001). Are closed-minded people more open to the idea of killing themselves? *Suicide and Life-Threatening Behavior, 31*, 9-14.

Eaves, L. J., Eysenck, H. J., & Martin, N. G. (1989). *Genes, culture, and personality: An empirical approach.* San Diego, CA: Academic Press, Inc.

Ehrler, D. J., Evans, J. G., & McGhee, R. L. (1999). Extending the Big-Five theory into childhood: A preliminary investigation into the relationship between Big-Five personality traits and behavior problems in children. *Psychology in the Schools, 36*, 451-458.

Eisenberg, N., Cumberland, A., Spinrad, T. L., Fabes, R. A., Shepard, S. A., Reiser, M., Murphy, B. C., Losoya, S. H., & Guthrie, I. K. (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development, 72*, 1112-1134.

Elkind, D. (1981). *The hurried child.* Reading, MA: Addison-Wesley Publishing Company.

Epstein, S., & O'Brien, E. J. (1985). The person-situation debate in historical and current perspective. *Psychological Bulletin, 98*, 513-537.

Erikson, E. H. (1980). *Identity and the life cycle.* New York: Norton.

Eysenck, H. J. (1947). *Dimensions of personality.* London: Kegan Paul.

Eysenck, H. J. (1960). Levels of personality, constitutional factors, and social influences: An experimental approach. *International Journal of Social Psychiatry, 6*, 12-24.

Finkelman, D., Ferrarese, M. J., Garmezy, N. (1989). A factorial, reliability, and validity study of the Devereux School Behavior Rating Scale. *Psychological Reports, 64*, 535-547.

Frenz, A. W., Carey, M. P., & Jorgensen, R. S. (1993). Psychometric evaluation of Antonovsky's sense of coherence scale. *Psychological Assessment, 5*, 145-153.

Freud. S. (1926). Inhibitions, symptoms, and anxiety. The standard edition of the complete psychological works of Sigmund Freud, 20, 75-175.

Frick, P. J., & Ellis, M. (1999). Callous-unemotional traits and subtypes of conduct disorder. *Clinical Child and Family Psychology Review, 2*, 149-168.

Frydenberg, E., & Lewis, R. (1993). Boys play sports and girls turn to others: Age, gender and ethnicity as determinants of coping. *Journal of Adolescence, 16*, 253-266.

Furnham, A., & Gunter, B. (1983). Sex and personality differences in self-reported social skills among British adolescents. *Journal of Adolescence, 6*, 57-69.

Garmezy, N. (1993). Vulnerability and resilience. In D. C. Funder & R. D. Parke (Eds.). *Studying lives through time: Personality and development* (pp. 377-398), Washington, DC: American Psychological Association.

Gilbert, B. O. (1991). Physiological and nonverbal correlates of extraversion, neuroticism, and psychoticism during active and passive coping. *Personality and Individual Differences, 12*, 1325-1331.

Glisky, M. L., Tataryn, D. J., Tobias, B. A., Kihlstrom, J. F., & McConkey, K. M. (1991). Absorption, openness to experience, and hypnotizability. *Journal of Personality and Social Psychology, 60*, 263-272.

Greenspoon, P. J., & Sasklofske, D. H. (2001). Toward an integration of subjective well-being and psychopathology. *Social Indicators Research, 54*, 81-108.

Harmon-Jones, E., Barratt, E. S., & Wigg, C. (1997). Impulsiveness, aggression, reading, and the P300 of the event-related potential. *Personality and Individual Differences, 22*, 439-445.

Heaven, P. C. L. (1996). Personality and self-reported delinquency: Analysis of the "Big Five" personality dimensions. *Personality and Individual Differences, 20*, 47-54.

Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology, 65*, 599-610.

Huey, S. J., & Weisz, J. R. (1997). Ego control, ego resiliency, and the Five-Factor Model as predictors of behavioral and emotional problems in clinic-referred children and adolescents. *Journal of Abnormal Psychology, 106*, 404-415.

Jang, K. L., Livesley, W. J., & Vernon, P. A. (1999). The relationship between Eysenck's P-E-N model of personality and traits delineating personality disorder. *Personality and Individual Differences, 26*, 121-128.

Jelinek, J., & Morf, M. E. (1995). Accounting for variance shared by measures of personality and stress-related variables: A canonical correlation analysis. *Psychological Reports, 76*, 959-962.

Kernberg, O. (1984). *Severe personality disorders.* New Haven, CT: Yale University Press.

Kirkcaldy, B. D., & Mooshage, B. (1993). Personality profiles of conduct and emotionally disordered adolescents. *Personality and Individual Differences, 15*, 95-96.

Lawrence, B., & Bennett, S. (1992). Shyness and education: The relationship between shyness, social class and personality variables in adolescents. *British Journal of Educational Psychology, 62*, 257-263.

Lazarus, R. A., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer Publishing Company.

Lewisohn, P. M., Rohde, P., Seeley, J. R., & Klein, D. N. (1997). Axis II psychopathology as a function of Axis I disorders in childhood and adolescence. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 1752-1759.

Lingjaerde, O., Foreland, A. R., & Engvik, H. (2001). Personality structure in patients with winter depression, assessed in a depression-free state according to the five-factor model of personality. *Journal of Affective Disorders, 62*, 165-174.

Luengo, M. A., Carrillo de la Pena, M. T., Otero, J. M., & Romero, E. (1994). A short-term longitudinal study of impulsivity and antisocial behavior. *Journal of Personality and Social Psychology, 66*, 542-548.

Lyness, J. M., Duberstein, P. R., King, D. A., Cox, C., & Caine, E. D. (1998). Medical illness burden, trait neuroticism, and depression in older primary care patients. *American Journal of Psychiatry, 155*, 969-971.

Malan, D. H. (1995). *Individual psychotherapy and the science of psychodynamics* (2nd ed.). Oxford: Butterworth-Heinemann.

Marcia, J. E., Waterman, A. S., Matteson, D. R., Archer, S. L., & Orlofsky, J. L. (1993). *Ego identity: A handbook for psychosocial research.* New York: Springer-Verlag.

Martin, R. A., Kazarian, S. S., & Breiter, H. J. (1995). Perceived stress, life events, dysfunctional attitudes, and depression in adolescent psychiatric inpatients. *Journal of Psychopathology and Behavioral Assessment, 17*, 81-95.

Martin, R., Watson, D., & Wan, C. K. (2000). A three-factor model of trait anger: Dimensions of affect, behavior, and cognition. *Journal of Personality, 68*, 869-897.

Marton, P., & Kutcher, S. (1995). The prevalence of cognitive distortion in depressed adolescents. *Journal of Psychiatry and Neuroscience, 20*, 33-38.

Marton, P., Golombek, H., Stein, B., & Korenblum, M. (1987). Behavioral disturbance and changes in personality dysfunction from early to middle adolescence. *Adolescent Psychiatry, 14*, 394-406.

Marton, P., Korenblum, M., Kutcher, S. P., Stein, B., Kennedy, B., & Pakes, J. (1989). Personality dysfunction in depressed adolescents. *Canadian Journal of Psychiatry, 34*, 810-813.

Masten, A. S., Hubbard, J. J., Gest, S. D., Tellegen, A., Garmezy, N., & Ramirez, M. (1999). Competence in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology, 11*, 143-169.

Mathijssen, J. J. J. P., Koot, H. M., & Verhulst, F. C. (1999). Predicting change in problem behavior from child and family characteristics and stress in referred children and adolescents. *Development and Psychopathology, 11*, 305-320.

Maziade, M., Cote, R., Bernier, H., & Boutin, P. (1989). Significance of extreme temperament in infancy for clinical status in pre-school years: I. Value of extreme temperament at 4-8 months for predicting diagnosis at 4.7 years. *British Journal of Psychiatry, 154*, 535-543.

McCrae, R. R. (2001). Fact and interpretations of personality trait stability: A reply to Quackenbush. *Theory and Psychology, 11*, 837-844.

Mills, L. B., & Huebner, E. S. (1998). A prospective study of personality characteristics, occupational stressors, and burnout among school psychology practitioners.

Journal of School Psychology, 36, 103-120.

Mitic, W. R., McGuire, D. P., & Neumann, B. (1987). Adolescent problem drinking and perceived stress. *Journal of Alcohol and Drug Education, 33*, 45-54.

Neto, F., & Barros, J. (2000). Psychosocial concomitants of loneliness among students of Cape Verde and Portugal. *Journal of Psychology, 134*, 503-514.

Newcomb, M. D. (1990). Social support and personal characteristics: A developmental and interactional perspective. *Journal of Social and Clinical Psychology, 9*, 54-68.

Noyes, R., Langbehn, D. R., Happel, R. L., Stout, L. R., Muller, B. A., & Longley, S. L. (2001). Personality dysfunction among somatizing patients. *Psychosomatics, 42*, 320-329.

Oas, P. T. (1985). Impulsivity and delinquent behavior among incarcerated adolescents. *Journal of Clinical Psychology, 41*, 422-424.

Rapoport, J. L., & Ismond, D. R. (1996). *DSM-IV training guide for the diagnosis of childhood disorders*. Levittown, PA: Brunner/Mazel.

Rende, R. D., Plomin, R., Reiss, D., & Hetherington, E. M. (1993). Genetic and environmental influeunces of depressive symptomatology in adolescence: Individual differences and extreme scores. *Journal of Child Psychology and Psychiatry, 8*, 1387-1398.

Rigby, K., Mak, A. S., & Slee, P. T. (1989). Impulsiveness, orientation to institutional authority, and gender as factors in self-reported delinquency among Australian adolescents. *Personality and Individual Differences, 10*, 689-692.

Robbins, L. (1978). Sturdy childhood predictors of adult antisocial behavior: Replications from longitudinal studies. *Psychological Medicine, 8*, 611-622.

Rosenthal, D. (1963). A suggested conceptual framework. In D. Rosenthal (Ed.), *The Genain quadruplets* (pp. 505-516). New York: Basic Books.

Shewchuk, R. M., Elliott, T. R., MacNair-Semands, R. R., & Harkins, S. (1999). Trait influences on stress appraisal and coping: An evaluation of alternative frameworks. *Journal of Applied Social Psychology, 29*, 685-704.

Silverthorn, P., Frick, P. J., & Reynolds, R. (2001). Timing and onset of correlates of severe conduct problems in adjudicated girls and boys. *Journal of Psychopathology and Behavioral Assessment, 23*, 171-181.

Skodol, A. E. (1998). Personality and coping as stress-attenuating or –amplifying factors. In B. P. Dohrenwend (Ed.), *Adversity, stress, and psychopathology* (pp. 377-389), New York: Oxford University Press.

Spector, P. E., Schneider, J. R., Vance, C. A., Hezlett, S. A. (2000). The relation of cognitive ability and personality traits to assessment center performance. *Journal of Applied Social Psychology, 30*, 1474-1491.

Stacy, A. W., Sussman, S., Dent, C. W., Burton, D., & Flay, B. R. (1992). Moderators of peer social influence in adolescent smoking. *Personality and Social Psychology Bulletin, 18*, 163-172.

Stanford, M. S., Greve, K. W., Boudreaux, J. K., & Mathias, C. W. (1996). Impulsiveness and risk-taking behavior: Comparison of high-school and college students using the Barratt Impulsiveness Scale. *Personality and Individual Differences, 21*, 1073-1075.

Stonehill, E., & Crisp, A. H. (1977). Psychoneurotic characteristics of patients with anorexia nervosa before and after treatment and at follow-up 4-7 years later. *Journal of Psychosomatic Research, 21*, 187-193.

Strupp, H. H. (1987). Psychotherapy research: Current trends. *Psychotherapy in Private Practice, 5*, 1-14.

Strupp, H. H. (1989). Psychotherapy: Can the practitioner learn from the researcher? *American Psychologist, 44*, 717-724.

Strupp, H., & Binder, J. L. (1984). *Psychotherapy in a new key.* New York: Basic Books.

Sullivan, H. S. (1953). *The interpersonal theory of psychiatry.* New York: Norton.

Swendsen, J., Hammen, C., Heller, T., & Gitlin, M. (1995). Correlates of stress reactivity in patients with bipolar disorder. *American Journal of Psychiatry, 152*, 795-797.

Talbert, F. S., Braswell, L. C., Albrecht, J. W., & Hyer, L. A. (1993). NEO-PI profiles in PTSD as a function of trauma level. *Journal of Clinical Psychology, 49*, 663-669.

Tatum, H. E. (2000). Development of the Adolescent Big Five Inventory. Unpublished doctoral dissertation, University of Tennessee, Knoxville.

Torgersen, S. (1993). Genetics. In A. S. Bellack & M. Hersen (Eds.), *Psychopathology in adulthood* (pp. 41-56). New York: Allyn & Bacon.

True, W. R., Rice, J., Eisen, S. A., & Heath, A. C. (1993). A twin study of genetic and environmental contributions to liability for posttraumatic stress symptoms. *Archives of General Psychiatry, 50*, 257-264.

Trull, T. J. (1992). DSM-III-R personality disorders and the five-factor model of personality: An empirical comparison. *Journal of Abnormal Psychology, 101*, 553-560.

Trull, T. J., & Sher, K. J. (1994). Relationship between the five-factor model of personality and Axis I disorders in a nonclinical sample. *Journal of Abnormal* Psychology, 103, 350-360.

Tupes, E. C., & Christal, R. E. (1961). Recurrent personality factors based on trait *ratings*. (Aeronautical Systems Division Technical Report No. 61-97). Lackland, TX; United States Air Force.

Verplanken, B. & Herabadi, A. (2001). Individual differences in impulse buying tendency: Feeling and no thinking. *European Journal of Personality, 15*, S71-S83.

Vitacco, M. J., & Rogers, R. (2001). Predictors of adolescent psychopathology: The role of impulsivity, hyperactivity, and sensation seeking. *Journal of the American Academy of Psychiatry and the Law, 29*, 374-382.

Vitaro, F., Tremblay, R. E., & Bukowski, W. M. (2001). Friends, friendships, and conduct disorders. In J. Hill & B. Maughan (Eds.), Conduct disorders in childhood and adolescence. Cambridge child and adolescent psychiatry (pp. 346-378). New York: Cambridge University Press.

Watson, D., & Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological Bulletin, 98*, 219-235.

Wiggins, J. S., & Pincus, A. L. (1989). Conceptions of personality disorders and dimensions of personality. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 1*, 305-316.

Wills, T. A. (1986). Stress and coping in early adolescence: Relationships to substance use in urban school samples. *Health Psychology, 5*, 503-529.

Wolfenstein, M., & Trull, T. J. (1997). Depression and openness to experience. *Journal of Personality Assessment, 69*, 614-632.

Wyrick, L. C., Gentry, W. D., & Shows, W. D. (1977). Aggression, assertion, and openness to experience: A comparison of men and women. *Journal of Clinical Psychology, 33*, 439-443.

Young, J. E. (1990). *Cognitive therapy for personality disorders: A schema-focused approach* (rev. ed.). Sarasota, FL: Professional Resource Press.

Young, J. E., & Gluhoski, V. L. (1998). Schema-focused diagnosis for personality disorders. In F. W. Kaslow (Ed.). *Handbook of relational diagnoses and dysfunctional family patterns* (pp. 300-321). New York: John Wiley & Sons.

Zubin, J., & Spring, B. (1977). Vulnerabilty—A new view of schizophrenia. *Journal of* Abnormal Psychology, 86, 103-126.

APPENDICES

Table A-1

Description of 581 Participants

	Mean	SD
Age in years	14.34	1.39
Average number of siblings	1.56	1.68
Youth Self-Report (t-scores):		
Total Problems	52.53	8.12
Internalizing Problems	51.33	9.41
Externalizing Problems	52.58	8.54
	N	**%**
Sex:		
Female	316	54.39
Male	265	45.61
Grade:		
6th	63	10.85
7th	120	20.65
8th	139	23.92
9th	159	27.37
10th	100	17.21
Ethnicity:		
Caucasian	534	91.91
African American	18	3.10
Asian	14	2.41
Hispanic	9	1.55
American Indian	6	1.03
Parents Married and Living Together	402	69.19

Table A-2

Regression Results for Prediction of Adolescent Psychopathology From Life Event Stress With Stress Appraisal as a Mediator (N = 581)

Variable	*B*	*SE B*	β
DV = Total Problems			
Step 1			
Life Event Stress	7.41	0.68	0.41
Step 2			
Life Event Stress	4.68	0.60	0.26
Stress Appraisal	0.92	0.06	0.52
DV = Internalizing Problems			
Step 1			
Life Event Stress	7.10	0.71	0.38
Step 2			
Life Event Stress	4.20	0.62	0.23
Stress Appraisal	0.97	0.06	0.53
DV = Externalizing Problems			
Step 1			
Life Event Stress	6.00	0.64	0.36
Step 2			
Life Event Stress	4.04	0.61	.024
Stress Appraisal	0.66	0.06	0.40

Note. DV = Total Problems: $R^2 = .17$ for Step 1, $\Delta R^2 = .24$ for Step 2 ($p < .01$). DV = Internalizing Problems: $R^2 = .15$ for Step 1, $\Delta R^2 = .26$ for Step 2 ($p < .01$). DV = Externalizing Problems: $R^2 = .13$ for Step 1, $\Delta R^2 = .15$ for Step 2 ($p < .01$).

$p < .001$ for all standardized beta weights (β).

Table A-3
Intercorrelations Between Stress Appraisal, Personality, and Psychopathology

Measure	1	2	3	4	5	6	7	8	9
1. Stress	-	.667**	-.278**	-.164**	-.346**	-.300**	.594**	.600**	.474**
2. N		-	-.380**	-.230**	-.514**	-.371**	.714**	.706**	.578**
3. E			-	.482**	.252**	.391**	-.294**	-.337**	-.153**
4. O				-	.148**	.397**	-.194**	-.139**	-.196**
5. A					-	.402**	-.479**	-.408**	-.525**
6. C						-	-.376**	-.248**	-.444**
7. TOT							-	.887**	.857**
8. INT								-	.647**
9. EXT									-

Note. N = Neuroticism; E = Extraversion; O = Openness to Experience; A = Agreeableness; C = Conscientiousness; TOT = Total Problems; INT = Internalizing Problems; EXT = Externalizing Problems.
*$p < .05$. **$p < .01$.

Table A-4
Regression Results for Prediction of Adolescent Psychopathology From Stress Appraisal With Personality as a Mediator (N = 581)

Variable	*B*	*SE B*	β
	DV = Total Problems		
Step 1			
Stress Appraisal	1.05	0.06	.59**
Step 2			
Stress Appraisal	0.34	0.07	.19**
Neuroticism (N)	9.66	0.80	.51**
Extraversion (E)	-10.15	3.48	-.51**
Openness (O)	-11.76	3.94	-.40**
Agreeableness (A)	-3.21	0.75	-.15**
Conscientiousness (C)	-1.98	0.83	-.08*
E x O	3.30	1.08	.81**
	DV = Internalizing Problems		
Step 1			
Stress Appraisal	1.10	0.06	.60**
Step 2			
Stress Appraisal	0.40	0.07	.22**
Neuroticism (N)	10.33	0.84	.53**
Extraversion (E)	-12.30	3.65	-.60**
Openness (O)	-9.47	4.13	-.32*
Agreeableness (A)	-2.01	0.78	-.09*
Conscientiousness (C)	1.71	0.87	.07*
E x O	3.15	1.13	.75**
	DV = Externalizing Problems		
Step 1			
Stress Appraisal	0.78	0.06	.47**
Step 2			
Stress Appraisal	0.24	0.07	.14**
Neuroticism (N)	5.68	0.80	.33**
Extraversion (E)	3.59	0.68	.19**
Openness (O)	-1.68	0.96	-.06
Agreeableness (A)	-5.19	0.74	-.26**
Conscientiousness (C)	-5.19	0.83	-.23**

Note. DV = Total Problems: $R^2 = .35$ for Step 1, $\Delta R^2 = .21$ for Step 2 ($p < .001$). DV = Internalizing Problems: $R^2 = .36$ for Step 1, $\Delta R^2 = .19$ for Step 2 ($p < .001$). DV = Externalizing Problems: $R^2 = .23$ for Step 1, $\Delta R^2 = .25$ for Step 2 ($p < .001$). E x O = moderating interaction between Extraversion and Openness to Experience.
*$p < .05$. **$p < .01$.

Figure Caption

Figure A-1. Mediational pathways predicting psychopathology from life event stress with stress appraisal as a mediator. Solid lines represent direct pathways. Dotted lines represent the effect of life event stress on psychopathology with stress appraisal serving as a mediator. Values on the paths outside parentheses are zero-order path coefficients (standardized betas). Values on the paths inside parentheses are unstandarsized betas. The unstandardized beta equations on the top solid lines represent the lower end of a 95% confidence interval. * $p < .05$. ** $p < .001$.

Figure A-2. Mediational pathways predicting psychopathology from stress appraisal with personality as a mediator. Solid lines represent direct pathways. Dotted lines represent the effect of stress appraisal on psychopathology with all personality factors serving as mediators. Values on the paths outside parentheses are zero-order path coefficients (standardized betas). Values on the paths inside parentheses between stress appraisal and the five personality factors are Pearson's correlation coefficients. Values on the paths inside parentheses between stress appraisal and psychopathology are unstandardized betas. The unstandardized beta equations on the top solid lines represent the lower end of a 95% confidence interval. * $p < .05$. ** $p < .01$. *** $p < .001$.

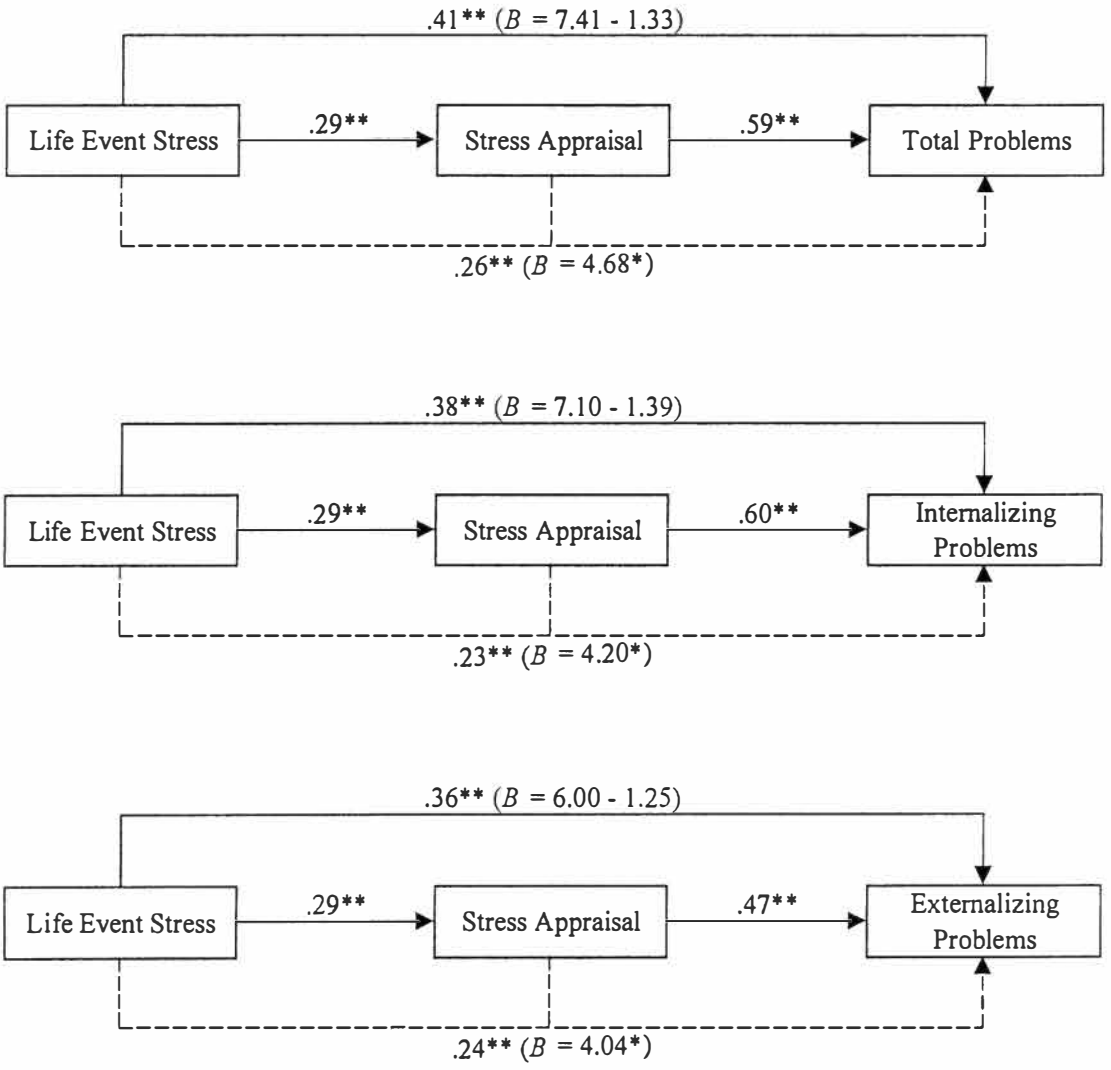
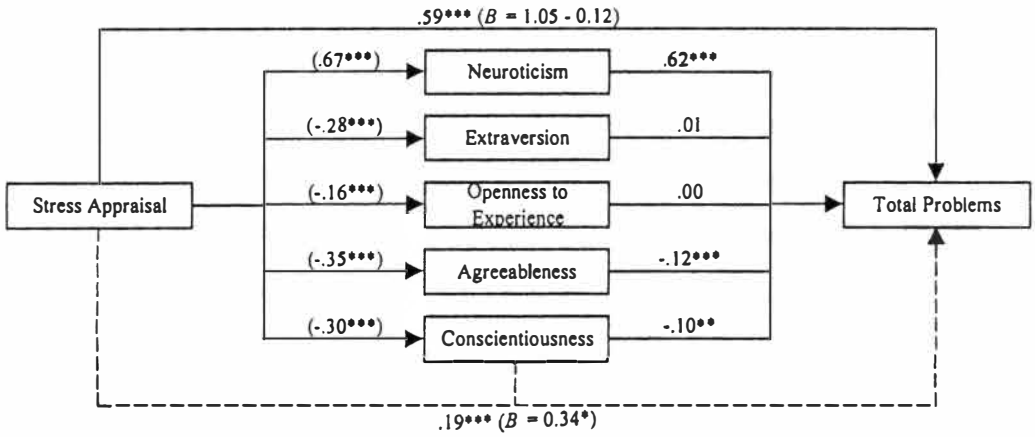
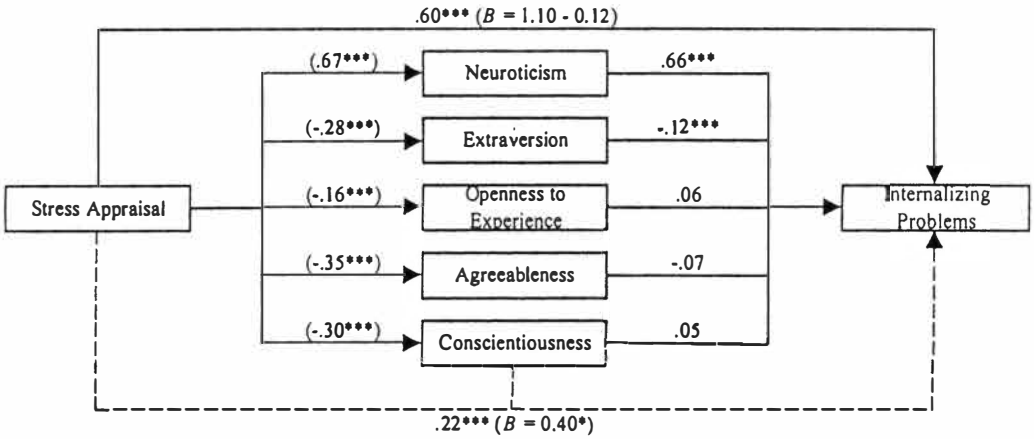

.41** (B = 7.41 - 1.33)
Life Event Stress
.29**
Stress Appraisal
.59**
Total Problems
.26** (B = 4.68*)
.38** (B = 7.10 - 1.39)
Life Event Stress
.29**
Stress Appraisal
.60**
Internalizing Problems
.23** (B = 4.20*)
.36** (B = 6.00 - 1.25)
Life Event Stress
.29**
Stress Appraisal
.47**
Externalizing Problems
.24** (B = 4.04*)

Figure A-1


.59*** (B = 1.05 - 0.12)
Stress Appraisal
(.67***)
Neuroticism
.62***
(-.28***)
Extraversion
.01
(-.16***)
Openness to Experience
.00
(-.35***)
Agreeableness
-.12***
(-.30***)
Conscientiousness
-.10**
Total Problems
.19*** (B = 0.34*)


.60*** (B = 1.10 - 0.12)
Stress Appraisal
(.67***)
Neuroticism
.66***
(-.28***)
Extraversion
-.12***
(-.16***)
Openness to Experience
.06
(-.35***)
Agreeableness
-.07
(-.30***)
Conscientiousness
.05
Internalizing Problems
.22*** (B = 0.40*)

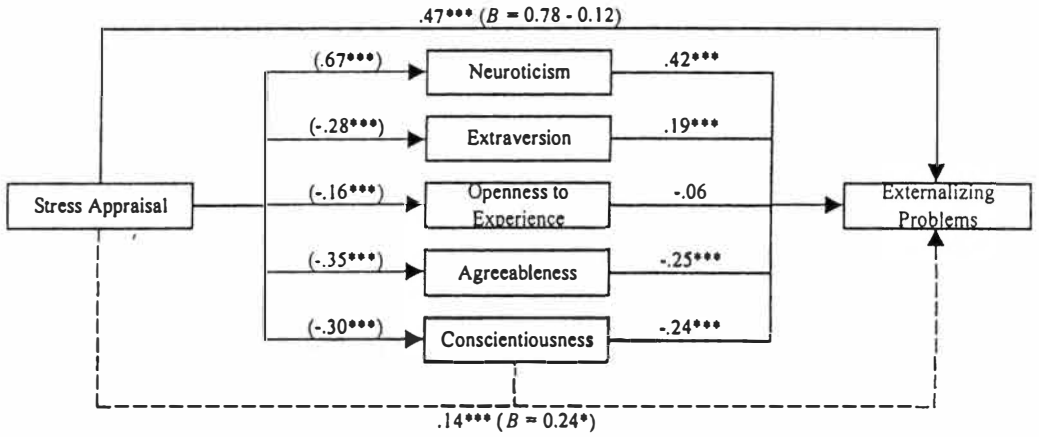

.47*** (B = 0.78 - 0.12)
Stress Appraisal
(.67***)
Neuroticism
.42***
(-.28***)
Extraversion
.19***
(-.16***)
Openness to Experience
-.06
(-.35***)
Agreeableness
-.25***
(-.30***)
Conscientiousness
-.24***
Externalizing Problems
.14*** (B = 0.24*)

Figure A-2

VITA

Matthew Bruce Wintersteen was born in Milwaukee, WI on February 11, 1973. He was raised in Sterling, VA and graduated from Park View High School in Sterling in 1991. Following high school, he attended Virginia Polytechnic Institute and State University (Virginia Tech) and received a B.S. in psychology in 1995. In 1996, he married Carrie Ann Miller of LaVale, MD and moved to Connecticut, where he received an M.A. in general/experimental psychology with a concentration in quantitative methods from the University of Hartford in 1999.

Matthew is pursuing his doctorate in clinical psychology at the University of Tennessee, Knoxville and is currently attending internship at the Vanderbilt University Consortium of Professional Psychology. His primary placement is in child and adolescent outpatient services through the Vanderbilt University Medical Center Department of Psychiatry.