Anxiety and Depression in Children and Adolescents:

An Examination of Cognition and
Attributional Style

by

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ANXIETY AND DEPRESSION IN CHILDREN AND ADOLESCENTS: AN EXAMINATION OF COGNITION AND ATTRIBUTIONAL STYLE

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(ABSTRACT)

The relationship of attributional style to anxiety and depression in children and adolescents has received little attention in comparison to studies conducted with adult populations. However, preliminary studies suggest that children and adolescents evidence similar attributional style patterns to those expressed by adults. This study further examines the relationship of anxiety and depression to attributional style to determine the utility and applicability of the adult model to children and adolescents. In addition, this study examines the accuracy of obtaining attributional style ratings using hypothetical events (i.e., questionnaire method) versus real-life events. Further, this study was designed to study the relationship of emotional measures of anxiety and depression (i.e., Children's Depression Inventory and Revised Children's Manifest Anxiety Scale) versus cognitive measures of anxiety and depression (Negative Affect Self-Statement Questionnaire). It was hypothesized that real life events (as measured by the Specific Life Events Schedule; SLES) would prove to be a concurrently valid measure of attributional style in relation to hypothetical events presented through a
questionnaire method (as measured by the Children's Attributional Style Questionnaire; CASQ). As well, it was predicted that real life events of the SLES would prove to be a more accurate measure of attributional style than hypothetical life events of the CASQ, in relation to achieved depression scores. Furthermore, it was predicted that certain indices of attributional style and negative self-statements would prove to be significant predictors of depression (as measured by the CDI) and anxiety scores (as measured by the RCMAS).

Results indicated that the SLES was not a concurrently valid or more accurate measure of attributional style than the CASQ. However, the positive and negative composite scores of the CASQ evidenced significant correlations with the CDI, in addition to supporting results of previous studies indicating a negative attributional style. Furthermore, results indicated that cognitions and attributions were significant predictors of depression scores, while cognitions were found to be significant predictors of anxiety scores. Thus, children from this study evidenced similarities to adult populations in the expression of anxiety and depression.
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Philippians 4:13
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Introduction

The primary purpose of this study was to examine causal explanations (attributions) of life events made by children, as well as depressive and anxious self-statements made by children, and their relations to self-reported depression and anxiety. In several studies, a debilitating attributional style for explaining both positive and negative personal life events has been shown to be indicative of depressed individuals (adults and children). This particular style of explaining life events, which has been demonstrated to maintain varying levels of depression, has been termed "negative attributional style." Additionally, research conducted with anxious adults has revealed a similar response style to that exhibited by depressed individuals for negative life events (i.e., a negative attributional style) but a different response style for positive life events. Although anxious adults display a similar attributional style to depressed adults for negative life events, they evidence a more adaptive attributional style for positive life events. Limited research conducted with anxious children has revealed similar findings (Bell-Dolan & Last, 1990; Bell-Dolan & Wessler, 1994).

Past and current research studies have primarily used a questionnaire method to assess attributional style, such as The Attributional Style Questionnaire (ASQ) or The Children's Attributional Style Questionnaire (CASQ). A recent concern posed by researchers (e.g., Peterson, Villanova, & Raps, 1985; Peterson & Villanova, 1988) is that current attributional style instruments exclusively provide hypothetical events for subject
appraisal, which may not be relevant to all individuals. Thus, another focus of the present study was to examine attributional style, as measured by self-generated positive and negative life events provided by children/adolescents themselves, and the attributions made concerning those life events.

Finally, the present study was designed to examine negative self-statements (i.e., negative cognitions) in reference to anxiety, depression, and negative affect. Several studies suggest that negative affectivity is a construct common to both anxiety and depression, but that positive affectivity is more characteristic of anxiety than depression (Watson & Clark, 1984; Watson, Clark, & Carey, 1988). Thus, the specificity and commonality of debilitating anxious self-statements to anxiety, debilitating depressive self-statements to depression, and the overlap of debilitating negative affect self-statements to anxiety and depression will be examined in children/adolescents.

**Depression and Attributional style**

Much of the research on depression has been guided by Beck’s cognitive theory (1967) and the hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1987; Abramson, Seligman, & Teasdale, 1978). In these theories, “depression” is used to describe a complex pattern of affect, cognition, and behavior that can range from mild to severe. Furthermore, when properly diagnosed, depression is assumed to have certain characteristic signs and symptoms that include a specifiable onset, course, duration, and outcome (Beck, 1967). According to Beck, depression can be defined according to the
following five factors: 1) a specific alteration in mood (sadness, loneliness, apathy); 2) a negative self-concept associated with self-reproaches and self-blame; 3) regressive and self-punitive wishes (desires to escape, hide, or die); 4) vegetative changes (anorexia, insomnia, loss of libido); and 5) a change in activity level (retardation or agitation).

In addition, Beck's cognitive theory of depression (1967) is characterized by the negative triad: a negative view of the self, the world, and the future. A negative view of the self consists of a belief of deficiency, inadequacy, or unworthiness. A negative view of the world involves formulating life experiences in terms of defeat. Finally, a negative view of the future is the expectation that present difficulties will persist into the future.

Beck's theory of depression asserts that depression-prone individuals are more likely to make causal inferences about their environments that are unreal, illogical, and/or extreme. These inferences, also called cognitive distortions, are hypothesized to consist of the following types of logical errors: 1) arbitrary inference (i.e., drawing a conclusion without sufficient supporting evidence); 2) selective abstraction (i.e., focusing on a detail taken out of context and conceptualizing an experience based upon that detail); 3) overgeneralization (i.e., overinterpreting the meaning of a negative outcome); 4) magnification and minimization (i.e., magnifying one's own mistakes while minimizing the same mistakes for other individuals); 5) personalization (i.e., taking responsibility for events that the person was not involved in); and 6) dichotomous thinking (i.e., placing life experiences in one of two opposite categories; typically in the negative category) (Beck, Rush, Shaw, & Emery, 1979).
Many researchers have suggested that childhood depression is similar to adult depression with minor developmental variations (cf. Kovacs & Beck, 1977). Current research data indicates that minor and major depression (as determined with adult criteria) are present in the child population at a rate of 1.8% to 2.5%. Furthermore, 33% to 50% of children referred to mental health agencies are considered to be significantly depressed (Cantwell & Carlson, 1980), while 20%-30% of children in non-clinical populations evidence mild to moderate depressive symptoms, although not necessarily the disorder (Rutter, Graham, Chadwick, & Yule, 1976). The four major components of depression in children, as well as adults, are: 1) a mood disturbance; 2) a pattern of negativistic thinking (self-deprecation and suicidal ideation; 3) a loss of interest and decreased activity; and 4) disturbances in eating and sleeping (Kovacs & Beck, 1977).

In 1978, Abramson, Seligman, and Teasdale proposed the learned helplessness theory of depression. The theory of learned helplessness consists of three specific components: contingency, cognition, and behavior. Abramson et al. (1978) state that contingency is the concept which describes the objective relationship between a person's actions in relation to the outcomes subsequently experienced by that person. However, the most important aspect of contingency is considered to be the issue of controllability (whereby a person's actions consistently produce certain outcomes) versus uncontrollability (whereby a random relationship exists between a person's actions and outcomes).
The second aspect of learned helplessness, cognition, accounts for how the person "perceives, explains, and/or extrapolates the contingency of the event." Specifically, a person's perception of the event is formulated based upon the level of controllability versus uncontrollability of the event. Furthermore, cognition also involves the process of combining both the perception and explanation of the event in order to anticipate what will happen in the future. Specifically, if a person believes (s)he has failed an event as a result of incompetence or stupidity, then it is highly probable that (s)he will fail again in similar situations that require a similar level of competence and/or intelligence.

The last aspect of learned helplessness refers to a person's behavior, or the "observable consequences of (non)contingency and the person's cognitions about it." Abramson et al. (1978) believe that passivity versus activity is the key concept to be assessed when a person encounters a situation different from the one in which the uncontrollability was initially experienced. Specifically, does the person give up and fail to react in such a way that would allow him/her to have control over the situation (passivity), or does (s)he find a way to maneuver through the life event that will allow a greater level of controllability (activity)?

Initially, behavioral observations from animal studies served as the model for the development of learned helplessness theory. Abramson et al. (1987) describe one such vignette in which the development of learned helplessness is observed in laboratory rats. Specifically, a rat is placed in a metal cage, receives a painful electric shock through the floor of the cage, and subsequently becomes frantic (i.e., attempting to escape the cage by
pawing and climbing the walls). The electrical current is turned off five seconds later. Following a series of 80 shocks, the rat no longer attempts to escape the painful shock, eventually huddling in a corner to "take" the shock (staying motionless). Later, the rat is placed in a different cage in which it can escape the shock by running to the other side; however, it makes no attempt to seek relief from the painful shock, and moves very little.

In this example, the concept of contingency is directly manipulated in the rat (uncontrollability), to which it develops a maladaptive behavior pattern (passivity and crouching in the corner). Implicitly, the rat demonstrates the development of learned helplessness by having developed an "expectancy" that the event (the shock) will occur again, for which nothing can be done to alleviate it even though the animal is subsequently placed in a cage in which escape is possible.

As the theory relates to humans, Abramson et al. (1978) state that in order for learned helplessness to occur, a person must perceive the following as happening: 1) desired outcomes are unlikely to occur; 2) harsh or bad outcomes are likely to occur; and 3) nothing can be done by the individual to change the likelihood of these events from occurring. In particular, once these criteria have been met, the manner in which a person perceives, explains, and behaves according to the event has a significant and deleterious impact on the person's level of functioning.

Although the initial learned helplessness theory described the process by which individuals develop a maladaptive style of perceiving and responding to daily life events, there were a few areas which Abramson et al. determined were not addressed by the
original theory. First, the original theory did not address the issue of "what determined the chronicity and generality of helplessness and depression." In addition, the original theory did not explain the self-esteem loss which is frequently observed in depressive individuals, or why these same individuals continually blame themselves for events which they perceive themselves as not having control over. Thus, Abramson et al. (1978) reformulated the theory of learned helplessness by adding explanatory style (i.e., attributional style) as a key concept in describing the "habitual tendency for an individual to offer the same sorts of explanations for diverse bad events." The reformulation of the learned helplessness theory was extended to depression, identifying attributional style as a primary risk factor. Further, it was hypothesized that depressed individuals attributed the cause of bad life events to internal, stable, and global factors and the cause of good events to external, unstable, and specific factors. This negative attributional style for both good and bad events was believed to increase the likelihood of a person becoming susceptible to depression, or in the least, maintaining a high level of depression (Abramson et al., 1978).

Attributional style can be viewed along three separate distinct dimensions: internal vs. external, stable vs. unstable, and global vs. specific. The first attributional dimension involves internal versus external explanations of life events. People who maintain an internal explanation for a life event believe that an event takes place as a result of something they did. However, an external explanation of a life event involves the belief that events occur as a result of what someone or something else has done to
produce the event. Furthermore, internal attributions for bad life events have been shown
to lead to lowered self-esteem, whereas external attributions for bad life events have not
(Seligman, Peterson, Kaslow, Tanenbaum, Alloy, & Abramson, 1984).

The second dimension of causal attributions involves stable versus unstable
explanations. A stable attribution for a life event is the belief that the event will most
likely occur on a frequent and persistent basis. However, an unstable attribution is the
belief that the event will not likely happen again, if at all. More specifically, stable
attributions for bad life events lead to helplessness over time whereas unstable
attributions do not (Peterson & Seligman, 1984).

The third and final dimension of attributions includes the concept of globality
versus specificity. A global attribution for an event is the belief that the event will have
(or has had) an effect on most areas of one's life (increases likelihood of helplessness
across situations). A specific attribution for an event is the belief that the event will only
affect a certain aspect of the person's life and nothing else.

As is evident in the above description of the learned helplessness theory,
attributional style has been categorized according to two separate styles: negative and
positive. A negative attributional style has been described as a pessimistic manner by
which individuals explain life events, whereas a positive attributional style is viewed as
an optimistic style of explaining life events. Specifically, a negative attributional style
consists of viewing negative life events through an internal, stable, and global lens, and
positive life events through an external, unstable, and specific lens. In contrast, a positive
attributional style consists of viewing negative life events through an external, unstable, and specific lens, and positive life events through an internal, stable, and global lens.

A negative attributional style for both bad life events (internal, stable, global) and good life events (external, unstable, specific) has been shown to be associated with the maintenance and/or development of depression (Seligman et al., 1984). Typically, depressed individuals attribute the cause of bad life events to themselves (internal), to something that happens frequently (stable), and to something that affects many, if not all, areas of their life (global). As well, they typically view good life events as being caused by some outside force (external), not happening on a frequent basis (unstable), and only minimally affecting certain areas of their lives (specific). For example, Seligman et al. (1979), in a sample of 145 undergraduate students, found that depressed students tended to report external and unstable attributions for good life events and internal, stable, and global attributions for bad life events as compared to their non-depressed peers.

Furthermore, Curry and Craighead (1990a) conducted a study of 18 adolescent psychiatric inpatients (10 female, 8 male), with an average hospitalization of 70 days, whose primary DSM-III diagnoses included: major depression, dysthymia, anxiety, conduct disorder, or anorexia nervosa. The adolescents were administered the Children’s Depression Inventory (CDI; Kovacs & Beck, 1977) and the Children’s Attributional Style Questionnaire (CASQ; Kaslow, Tanenbaum, & Seligman, 1978). Results of the study were found to be consistent with the reformulated learned helplessness theory of depression. Specifically, correlations obtained between the CASQ and the CDI were as
follows: negative composite (negative life events), \( r = .51 \), positive composite (positive life events), \( r = -.54 \), and difference score, \( r = -.63 \). Results suggest that these adolescents, who endorsed varying symptoms of depression, exhibited a negative attributional style for both negative life events (internal, stable, global) and positive life events (external, unstable, specific), as predicted by the reformulated model. The applicability of the reformulated model to this particular sample is somewhat questionable, however, due to a lack of information concerning the effect that the primary diagnoses had on the response of these individuals who were also depressed. Nonetheless, it appears that the reformulated theory is applicable for both depressed adults and adolescents.

In sum, attributional style can be described as a person's explanation of, or way of understanding, life events which occur on a daily basis (Seligman et al., 1979). The manner in which people attribute the causes of daily life events can affect how they view a single event, as well as others in the future. More specifically, once people perceive an event as negative, the type of causal explanations (attributions) they assign to the event are important factors which can potentially contribute to increased learned helplessness. The reformulated theory of learned helplessness proposes that attributions influence whether a person's helplessness will generalize over situations and across time. Its role in anxiety disorders, however, is uncertain - a topic which will be explored next.
Anxiety and Attributional style

Anxiety disorders have been differentiated into 13 separate categories in the DSM-IV. As with depression, anxiety is a common mood that affects 30-40% of the child/adolescent general population (Abe & Masui, 1981; Earls, 1980; Kastrup, 1976; Lapouse & Monk, 1964; Werry & Quay, 1971). Furthermore, many studies have found anxiety to be the most prevalent disorder in childhood and adolescence, even more so than conduct disorder, oppositional defiant disorder, attention deficit hyperactivity disorder, depressive disorders, substance abuse, and eating disorders, with a prevalence rate between 7.5% and 10% (Anderson, Williams, McGee, & Silva, 1987; Kashani, Beck, Hoper, Fallahi, Corcoran, McAllister, Rosenberg, & Reid, 1987; Kashani & Orvaschel, 1990). Anxiety disorders include “avoidance of feared stimuli or situations that are often important for optimal development (e.g., school, peer involvement, separation from parents) and/or somatic or physiological distress”. Furthermore, children who exhibit symptoms of anxiety are more likely to show a disturbance of mood, conduct, and functioning with family members and friends than their non-anxious peers (Kashani & Orvaschel, 1990; Strauss, Lahey, Frick, Frame, & Hynd, 1988; Strauss, Last, Hersen, & Kazdin, 1988).

According to Beck (1976), the cognitive aspects of anxiety include four central features: cognitive content, cognitive operations, cognitive structures, and cognitive products. The content is the material presented in the situation, such as the anxiety stimulus. The operations are the procedures by which the cognitive system operates in
order to process the information that has been perceived in the specific situation. The structure is the manner in which the information (about the anxiety stimulus) is arranged. Finally, the products are the results of the interaction of content, by operations within certain structures, and the appraisal that one makes concerning the anxiety provoking situation (Beck, 1976). The focus of anxiety produced cognitions is centered on threat and/or danger, and when exposed to certain situations, people will respond by evaluating the situation (level of danger present) and their ability to cope with it.

Beck, Emery, and Greenberg (1985) introduced the idea that cognitive schemas and/or automatic thoughts that are consistent with anxiety play an important role in the progression and maintenance of anxiety disorders. Specifically, cognitive schemas are “maps” (i.e., memories) that people construct of experiences they have encountered in their lives. If someone maintains a cognitive schema for anxiety provoking situations, then it is likely that she or he will draw upon this schema when in similar circumstances. Automatic thoughts are cognitions that occur prior to and/or during an anxiety-provoking situation. These thoughts, which are considered to be maladaptive, hinder the person’s ability to effectively deal with an anxiety-provoking situation (Beck et al., 1985). Furthermore, if a person continues to have these anxious thoughts, a pattern of responding to these anxious situations is created and the individual utilizes that pattern in future situations. This pattern of responding often includes: 1) “hypervigilance and selective abstraction of possible danger cues, to the exclusion of other environmental cues, 2) magnification of the degree of threat, and 3) overgeneralization of environmental
cues that represent danger” (Beck, 1986). Thus, anxious individuals tend to have a maladaptive or distorted way of thinking about danger situations in relation to normal individuals.

Most recently, the attributional style associated with depressed individuals has been examined in persons with anxiety disorders. In particular, studies with adults have found that individuals with social-evaluative anxiety tend to express a negative attributional style for bad life events, just as depressed individuals do. The connection between anxiety and the negative attributional style might be explained by the fact that people who see failures as due to internal and stable causes may directly link those attributions to their fear and avoidance of certain situations (Bell-Dolan & Wessler, 1994). Initially, work in the area of anxiety and attributions for children led researchers to examine test-taking situations and children’s levels of performance. However, more recent theories and research have expanded the study of anxiety and attributions to include interpersonal interactions (i.e., part of social-evaluative situations), which tend to elicit negative attributional styles (Bell-Dolan, 1994). For example, in a study conducted by Bell-Dolan and Last (1990), the attributional styles of children and adolescents, who ranged in age from 7 to 17 years, were examined. The children and adolescents were categorized according to three groups, normal controls, attention deficit hyperactivity disordered, and anxiety disordered (i.e., separation anxiety, overanxious disorder, avoidant disorder, simple and social phobias, obsessive-compulsive disorder, post traumatic stress disorder, and panic disorder). Results showed that anxious children made
more negative attributions for bad life events than did normal subjects. No differences were noted for positive events, however. Although tentative, these findings suggest that the "fit" of the reformulated model may be less clear for anxious versus depressive children/adolescents (especially for positive events).

**Comparison of Anxiety and Depression**

According to Beck’s cognitive model of psychopathology (1976), the emotional state characteristic of each disorder (anxiety and depression) is evoked by the specific content of the aberrant thinking, whereby the cognitive content helps differentiate the two from one another. Thus, anxiety involves cognitions related to external or internal danger or threat (Beck, 1971, 1976), while depression involves thoughts related to significant loss (Beck, 1976).

However, numerous studies have reported that a considerable overlap exists between anxiety and depression in children and adolescents (King, Ollendick, Gullone, 1991), especially when measured by the instruments commonly used to identify these disorders. For example, Norvell, Brophy, and Finch (1985) conducted a study with 30 hospitalized inpatient children identified as having emotional and/or behavioral problems. Specifically, 30% of the children were diagnosed with dysthymic disorder, 10% with conduct disorder, 7% with overanxious disorder, 7% with attention deficit disorder, while the rest of the children were diagnosed with a variety of other disorders (i.e., separation anxiety, schizoid, anorexia nervosa, mixed substance abuse, borderline, major depression,
and selective mutism). The children were individually administered the Revised-Children's Manifest Anxiety Scale (RCMAS; Reynolds & Paget, 1981), the Children's Depression Inventory (CDI; Kovacs, 1978) and the State Trait Anxiety Scale for Children (STAIC; Spielberger, 1973). Results of the study found that the CDI was significantly correlated with the RCMAS ($r = .70$), as well as the state ($r = .46$) and trait anxiety scales ($r = .62$) of the STAIC.

Furthermore, other researchers have found CDI and RCMAS scores to correlate significantly with one another (cf, Rodriguez & Routh, 1989). In this study, the sample consisted of 62 children who ranged in age from 8 to 13 years and who were categorized according to three separate groups: 1) children who were recently placed (within the past year) in an LD (learning disabled) class; 2) children who had been enrolled in an LD class for more than 1 year; and 3) children classified as non-LD. The children were also administered the Children's Attributional Style Questionnaire (CASQ; Kaslow, Tanenbaum, & Seligman, 1978). Results from this study also revealed that self-reported depression scores correlated negatively with the attributional style difference score $r = - .54$, while self-reported anxiety scores correlated positively with the attributional style difference score $r = .27$. The difference score (i.e., overall attributional style) is determined by subtracting the negative composite score (internal, stable, global ratings for negative life events) from the positive composite score (internal, stable, global ratings for positive life events). Thus, children who affirmed symptoms of depression tended to
endorse a negative attributional style, while children who affirmed symptoms of anxiety tended to endorse a positive attributional style.

In addition, results of a study conducted by Laurent and Stark (1993) revealed that children who experienced symptoms of both anxiety and depression tended to endorse more negative statements on instruments than anxious children, suggesting that comorbidity exacerbates the negative effects of anxiety and depression. It has also been suggested that the combination of depression and anxiety may inflate the exhibition of a depressive attributional style for negative life events (Craighead, Kennedy, & Corbett, 1989; Kaslow, Rehm, Pollack, & Siegel, 1988).

Further evidence of an existing overlap between anxiety and depression is supported in a study conducted by Craighead (1991), where anxiety, depression, conduct disorder and attributional style were examined. In this study, the sample consisted of 63 adolescent inpatients (33 males and 30 females) between the ages of 12 and 18 years. The adolescents were administered the CDI, RCMAS, CASQ and the Jessness Inventory (Jesness, 1983), a measure of conduct disorder. Based upon their scores on the CDI, the adolescents were categorized into two groups: depressed and non-depressed. The results of a comparison of the depressive adolescents and their attributional ratings were similar to recent findings which indicate that depressed adolescents have a negative attributional style for both good and bad life events. However, upon examination of the CASQ scores, it was revealed that although there were differences detected on the positive composite (internal, stable, global attributions) and difference scores, there were no differences
between the two groups on the negative composite (internal, stable, global attributions) score. These results suggest that other factors may have been impacting the responses of the non-depressed subjects. In fact, Craighead suggests that the occurrence of anxiety may be more prevalent among mildly depressed individuals as opposed to clinically depressed individuals. He noted that a negative attributional style may be more indicative of individuals who are depressed and anxious as opposed to being depressed only. Although it is not evident from this study, it is possible that the non-depressed adolescents from the study were experiencing symptoms of anxiety, which may in fact account for the lack of significance between the two groups (i.e., depressed vs. non-depressed) on the negative composite score. Specifically, many researchers suggest that individuals who report symptoms of anxiety or depression share similar characteristics of a construct common to both anxiety and depression called negative affectivity. This construct is examined next.

**Negative Affectivity, Anxiety, and Depression**

As is evident from the aforementioned studies, many researchers have shown that the ability of instruments to effectively discriminate between anxiety and depression is questionable (Hodges, 1990). Thus, researchers have studied the differences and commonalities of the two constructs in order to explain the high correlations evidenced between measures specifically designed to differentiate anxiety from depression. In 1984, Watson and Clark proposed the concept of Negative Affectivity, or the
combination of anxiety and depression, which is characterized by an overall "bad mood." They describe negative affectivity as a predisposition to experience negative emotions which ultimately affect the person's cognition, self-concept, and world. The major characteristics of negative affectivity are identified as: 1) feelings of nervousness, tension, worry, anger, guilt, self-dissatisfaction, and sadness (i.e., depression); 2) a pervasive disposition that can manifest itself in the absence of overt stress; and 3) a focus on the subjective experience as opposed to the objective condition (in which individuals focus more intently on themselves and their surroundings as opposed to how they perform in the outside world).

Negative affectivity is also described by Watson and Clark (1984) as the tendency to experience a wide range of negative and upsetting emotions. Emotions experienced by individuals with high levels of negative affect include anxiety, tension, anger, worry, frustration, hostility, contempt, disgust, guilt, worthlessness, dissatisfaction, and irritability. High negative affect individuals have a tendency to possess a negative self-concept and to be self-critical, as well as to be dissatisfied with themselves. They also tend to be more introspective and to exhibit behavior withdrawal that reflects a feeling of helplessness, as also seen in depression (Watson et al., 1988). Thus, negative affectivity is a seen as a construct which is common to both anxious and depressed individuals. However, Watson and Clark have proposed that positive affectivity differentiates anxiety from depression, as we shall see next.
Positive affectivity is a dimension that involves pleasurable involvement in an activity. Furthermore, a high level of positive affectivity includes enthusiasm, energy level, mental alertness, interest, joy, well-being, social dominance, and determination, whereas low positive affectivity involves fatigue, lethargy, and poor functioning (Watson & Tellegen, 1985). Anxiety has been characterized by high negative affectivity and varying levels of positive affectivity, whereas depression has been shown to be a combination of high negative affectivity and low positive affectivity (Watson et al, 1988). Studies suggest that positive affectivity is a critical factor in distinguishing between anxiety and depression (Tellegen, 1985; Watson & Tellegen, 1985); for example, results from a study conducted by Watson et al. (1988) showed that depressed subjects scored lower on positive affectivity than anxious subjects. These distinctions between negative and positive affectivity may have important implications in the study of individuals varying in levels of anxiety and depression.

**Instruments used to measure Attributional Style**

The Attributional Style Questionnaire (ASQ; Seligman, Abramson, Semmel, & von Baeyer, 1979) is a frequently used instrument to assess explanatory style in adults. The measure presents individuals with a specified number and type of good and bad events. The adults then rate the cause of the events on a 7-point scale, across the three attributional dimensions: internal vs. external, stable vs. unstable, global vs. specific. Three composite scores are derived from the questionnaire: 1) positive composite score
(consisting of internal, stable, and global ratings for positive life events); 2) negative composite score (internal, stable, and global ratings for negative life events); and 3) a difference score (an overall attributional style rating derived by subtracting the negative composite from the positive composite score).

The Children’s Attributional Style Questionnaire (CASQ; Kaslow, Tanenbaum, & Seligman, 1978), based on the ASQ, is a 48-item instrument designed to measure attributional styles for good and bad life events with children. The items are based on the same three dimensions used in the adult scale: internal vs. external, stable vs. unstable, global vs. specific. Similar to the adult measure of attributional style, the CASQ also consists of three composite scores: 1) positive composite score (consisting of internal, stable, and global ratings for positive life events); 2) negative composite score (consisting of internal, stable, and global ratings for negative life events); and 3) a difference score (an overall attributional style rating derived by subtracting the negative composite from the positive composite score). This instrument has been used primarily to measure attributional styles of depressed children.

More recently, research concerning attributional styles and anxiety has been conducted with adults, but has not received the same degree of attention with children (Bell-Dolan, 1994). Research conducted by Bell-Dolan and Last (1990) revealed that children with anxiety disorders were more likely to endorse negative attributions for negative life events than normal subject (non-anxious). Thus, the research and treatment
of anxiety disorders, by specifically studying attributional style of anxious persons, may prove to be as valuable as it has for the understanding and treatment of depression.

Finally, several methodological issues have been raised in previous attempts to identify and measure the attributions of individuals varying in anxiety and depression. For example, many researchers (e.g., Peterson, Villanova, & Raps, 1985) have found the ratings obtained from the ASQ and CASQ to be inadequate. These researchers claim that events for which subjects are making ratings are not personal enough (too general or abstract) and that personal life events should be more thoroughly examined in order to achieve a relevant measure of the person’s unique attributional style. With this in mind, a different technique (Content Analysis of Verbatim Explanations; CAVE) was created for the purpose of closely examining personal life events of individuals (Peterson, Luborsky, & Seligman, 1983). In the CAVE process, the subject is asked to write about both good and bad life events in sentence and paragraph form. Next, a trained rater extracts statements from the sample (for the event) for which a causal explanation was provided. Finally, independent judges rate the event-explanation using a 7-point scale, similar to that of the ASQ. An attributional profile is then created by averaging over all event-explanations.

The primary purpose of this study was to examine the correlates of attributional style in normal children/adolescents. Specifically, the relationship of anxiety, depression, and attributional style will be explored. Adult research studies have shown a reliable and consistent relationship between depression and anxiety and attributional style. However,
the validity and applicability of these findings to children/adolescents is uncertain at this stage. Furthermore, the use of hypothetical events (questionnaire method) to elicit attributional style ratings has been called into question by researchers who believe that acquiring real, personal life events from individuals would not only provide a more accurate measure of attributional style, but also provide richer information related to the origins of attributions. An additional purpose of this study was to examine the concept of negative affectivity, or commonalities shared between anxiety and depression, as well as to examine the specificity and differentiation between anxiety and depression, based upon negative self-statements (i.e., cognitions). In sum, the study was designed to test the utility and efficacy of various factors of attributional style and negative self-statements to predict anxiety and depression scores in normal school children.

**Hypotheses**

The following hypotheses were examined:

**Hypothesis 1**

It was hypothesized that the relationship between the positive composite score from the Specific Life Events Schedule (SLES) and the CASQ would be positive and significant. Similar predictions were made for the negative composite score and difference scores from both instruments. Thus, the attributional ratings (positive composite, negative composite, difference score) from the Specific Life Events Schedule would prove to be a concurrently valid measure of attributional style.
Hypothesis 2

It was hypothesized that the correlation between the positive composite score (internal, stable, global) on the SLES for good life events and depression ratings on the CDI would be inversely related and significantly greater than the correlation between the positive composite score on the CASQ and the depression ratings on the CDI. Furthermore, it was hypothesized that the correlation between the negative composite score (internal, stable, global) on the SLES for bad life events and depression ratings on the CDI would be positively related and significantly greater than the correlation between the negative composite score on the CASQ and the depression ratings on the CDI. In other words, it was predicted that "real life" event responses on the SLES would be more highly related to depression (as measured by the CDI) than hypothetical event responses on the CASQ.

Hypothesis 3

It was hypothesized that certain indices of attributional style (i.e., positive and negative composite scores) from the three attributional measures (CASQ, SLES, CAVE ratings) and negative self-statements from the NASSQ (Anxiety, Depression, Negative Affect scales) would prove to be significant predictors of depression scores, as measured by the CDI.
Hypothesis 4

It was hypothesized that certain indices of attributional style (i.e., positive and negative composite scores) from the three attributional measures (CASQ, SLES, CAVE ratings) and negative self-statements from the NASSQ (Anxiety, Depression, Negative Affect scales) would prove to be significant predictors of anxiety scores, as measured by the RCMAS.
Methods

Participants

The sample consisted of 107 children (46 males, 61 females) who ranged in age from 11-13 years. The children were recruited from two Montgomery County Middle Schools located in the cities of Blacksburg and Christiansburg, Virginia. Approximately 500 students were petitioned to take part in the study, with participation being dependent upon the return of both child assent and parent consent forms. The racial makeup of the students consisted primarily of Caucasian students, in addition to a minority of students of African-American, Asian, and Indian descent.

Procedure

Permission was obtained from the Superintendent’s office of Montgomery County for Blacksburg and Christiansburg Middle Schools. Following this, permission was obtained from the principals of the individual schools which had been chosen randomly for participation. Subsequently, permission was obtained from the teachers of eligible classrooms (6th grade students). A packet of information consisting of: 1) an initial letter explaining the nature of the study (see Appendix A), 2) a parent consent form (see Appendix B), 3) a child assent form (see Appendix C), and 4) a Child Behavior Checklist form (CBCL)\(^1\) with a stamped envelope returnable to the primary researcher was sent home with students in the chosen classrooms. At that time, the students were

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\(^1\) Information gathered from the FSSC-R, YSR, and the CBCL-parent were not examined for use in this study, however, data from these instruments will be used as part of another study.
informed that they would receive a coupon (good for free drink, sandwich, or order of fries) from a local vendor, if they returned their consent forms to their teacher (regardless of their decision to participate in the study). The students were informed that the first questionnaire administration would take place approximately two weeks from the date they received their initial information packets.

The instruments were administered in two separate phases. During the first phase, the following instruments were administered: the Children’s Depression Inventory (CDI) (see Appendix D), the Revised Children’s Manifest Anxiety Scale (RCMAS) (see Appendix E), the Children’s Attributional Style Questionnaire (CASQ) (see Appendix F), and the Specific Life Events Schedule-CAVE (SLES) (see Appendix G). During the second phase of the study (which took place less than one week thereafter), the following instruments were administered: the Negative Affect Self-Statement Questionnaire (NASSQ) (see Appendix H), the Fear Survey Schedule for Children-Revised (FSSC-R) and the Achenbach-Youth Self Report (YSR)\(^2\). Following completion of the second phase of the study, the coupons (from local vendors) were distributed to the teachers of students who either participated in the study or returned the child assent and parental consent forms only. At one middle school, the children were administered the questionnaires in a group setting, for which the principal researcher and trained undergraduate research assistants were present to assist the students. At the other middle school, the questionnaires were administered to the students in a classroom setting with

\(^2\) As noted earlier, information gathered from the FSSC-R and YSR were not examined in this study.
their peers, for which the teacher was present to answer questions. For this particular school, the teachers were given specific written and verbal instructions by the researcher on how to respond to the students’ questions prior to the administration of the instruments for the first and second phases.

**Instruments**

**Children’s Depression Inventory** (CDI; Kovacs & Beck, 1977). This 27-item scale measures levels of depression in children. The instrument consists of five factors: negative mood, anhedonia, interpersonal problems, ineffectiveness, and negative self esteem. Internal consistency (alpha coefficient) for a sample of 1,252 children ranging from 8 to 16 years of age was found to range from .83 to .89 (Smucker, Craighead, Craighead, & Green, 1986). Test-retest reliabilities (for the same sample) were found to be between .41 to .77 for a three week interval (Smucker et al., 1986). This instrument is sensitive to changing levels of depression over time and is most appropriate for use with children, ages 7 to 17 years, as well as children from various cultures. The instrument was used in the current study to determine self-reported levels of depression.

**Revised Children’s Manifest Anxiety Scale** (RCMAS; Reynolds & Richmond, 1978). This 37-item (28 anxiety items, 9 lie items), yes-no scale measures varying levels of anxiety. The instrument also possesses a five factor solution: concentration,
worry/oversensitivity, physiology, and two lie factors. Internal consistency (alpha coefficient) was found to be in the mid to upper .80s (Reynolds & Richmond, 1978) and from .79 to .85 for a sample of kindergarten children (Reynolds, Bradley, & Steele, 1980). Test-retest reliabilities have been found to be in the .90s over a three week period for Nigerian primary school children (Pela & Reynolds, 1982). The instrument was used in the current study to determine self-reported levels of anxiety.

**Children’s Attributional Style Questionnaire** (CASQ; Kaslow, Tanenbaum, & Seligman, 1978). This 48-item instrument is designed to measure children’s attributional styles for good and bad events. The items are measured along three dimensions: internal vs. external, stable vs. unstable, global vs. specific. The CASQ yields three scores: negative composite, positive composite, and a difference score which is obtained by subtracting the negative from the positive score. A high negative composite score indicates that the child tends to attribute the cause of negative events to internal, stable, and global factors (a depressogenic attributional style) (Abramson et al., 1978). A high score on the positive composite indicates that the individual attributes causes of positive life events to internal, stable, and global factors (i.e., a non-depressive attributional style) (Seligman, Abramson, Semmel, & von Baeyer, 1979). The instrument has been used primarily to measure attributional styles of depressed individuals. Internal consistency ratings range from .50 to .73 for the composite scores. Test-retest reliabilities have been found to range from .71 to .80 over a six month period (Friedlander, Traylor, & Weiss,
1986). The instrument was used in the current study to establish self-reported attributional scores.

**Specific Life Events Schedule (SLES)** The SLES was created by the author for the purpose of eliciting information about life events in order to measure attributions (causal explanations); its development is based upon the Daily Attributions Questionnaire (DAQ; Fresco, 1993), designed for use with adults. The DAQ is an instrument through which individuals record daily good and bad life events, and then make attributional ratings about the events across the three specified dimensions. On the SLES, subjects were required to describe, in writing, a good and bad life event that had happened to them in the last three months. The children then rated the cause of the events (both good and bad) along the three parameters of attributional style (internal vs. external, stable vs. unstable, global vs. specific) on a five-point likert scale. Finally, the children rated the importance/significance of the event as it impacted their life, on the given scale. There is no established validity or reliability data on the current form. This form is believed considered to be appropriate for use with school-aged children. The instrument was used in the current study to establish specific, personal attributional scores, using the CAVE process.

**Negative Affect Self-Statement Questionnaire** (NASSQ; Ronan, Kendall, & Rowe, 1994). The 39-item scale measures symptoms related to anxiety, depression, and
negative affect. Internal consistencies (alpha coefficients) were found to be .87 for 7-10 year olds and .94 for 11-15 year olds. Test-retest reliabilities have been found to be .96 for 7-10 year olds and .78 for 11-15 year olds. The instrument was used in the current study to determine self-reported levels of anxiety, depression, and negative affect.

Results

Reliability

To assess interrater reliability for the Content of Analysis of Verbatim

Explanations (CAVE) process, pearson correlations were computed between the author and a trained undergraduate research assistant. All transcriptions were coded by both raters. For the positive composite score, the pearson correlation coefficient was found to be .77 (p < .005); for the negative composite score, it was .65 (p < .005), and the overall composite score was .74 (p < .005). The author's ratings were used hereafter.

Subject Characteristics

Descriptive statistics were computed on sex in relation to the CDI, RCMAS, factors of the NASSQ (anxious cognitions, depressive cognitions, negative affectivity cognitions), and the positive, negative, and overall composite factors of the three attributional measures (CASQ, SLES, CAVE). Results indicated that significant differences were only evident for the negative composite score of CAVE ratings (males M = 9.02, SD = 2.60; females M = 7.63, SD = 2.64; p = .01) and approached significance
for the positive composite score of CAVE ratings (males $M = 9.56$, $SD = 2.43$; females $M = 8.50$, $SD = 3.21$; $p = .07$). Inasmuch as few sex differences were noted, gender was not considered for further analyses.

Descriptive statistics (i.e., means, standard deviations, ranges) were also performed on the CDI, RCMAS, factors of the NASSQ (anxious cognitions, depressive cognitions, negative affectivity cognitions), and the positive, negative, and overall composite factors of the three attributional measures (CASQ, SLES, CAVE) and are reported in Table 1.

**Relations Among Measures**

Pearson $r$ correlations were computed to determine the relationship between measures of depression and anxiety as assessed by the CDI and RCMAS (empirically validated measures of "mood" states), in relation to "cognitive" ratings from the Negative Affect Self-Statement Questionnaire factors of anxious cognitions, depressive cognitions, and negative affectivity cognitions (a newly devised measure). The results are shown in Table 2. As can be seen, the CDI was positively and significantly correlated with both the anxious cognitions ($r = .60$) and negative affectivity cognitions ($r = .54$) scales of the NASSQ, while the CDI and depressive cognitions scale evidenced an unexpectedly low correlation ($r = .05$). Although the CDI and depressive cognitions scale of the NASSQ are designed to measure the same construct, the obtained correlation indicates that they

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3 These results indicate that the CAVE process may be helpful in differentiating males from females on measures of attributional style through the use of the CAVE process.
were not significantly correlated in this study. In fact, the correlations evidenced by the CDI with the anxious cognitions and negative affectivity scales suggests a degree of overlap of depression with anxiety and negative affectivity, rather than with depression per se.

Additionally, the RCMAS was positively and significantly correlated with the anxious cognitions ($r = .65$) and negative affectivity cognitions ($r = .64$) scales of the NASSQ; however, it too resulted in a low correlation with the depressive cognitions ($r = .03$) of the NASSQ. The degree of correlation represented between the RCMAS and anxious cognitions scale indicates that the two are significantly related (i.e., tapping the same construct). In addition, the correlation between the RCMAS and negative affectivity cognitions scale suggests a degree of overlap between the anxiety and negative affectivity cognitions constructs. As is evident, anxiety and depression shared virtually identical relations between the anxious cognitions, depressive cognitions, and negative affectivity cognitions scores of the NASSQ.

Additional Pearson $r$ correlations were computed to determine the relationship between the CDI and RCMAS with the three measures of attributional style (CASQ, SLES, CAVE ratings) along the three dimensions (positive, negative, and overall composite scores) (see Table 3). Results indicate that the positive ($r = -.34, p = .0001$), negative ($r = .27, p = .005$), and overall ($r = -.42, p = .0001$) composite scores of the CASQ were significantly related to depression scores on the CDI. For the RCMAS, significant correlations were also achieved for the positive ($r = -.31, p = .001$), negative ($r
=.24, \( p = .01 \)), and overall \( (r = -.38, \ p = .0001) \) composite scores of the CASQ, as well as to the overall composite score \( (r = -.194, \ p = .05) \) of the SLES. Further, the negative composite score of the SLES approached significance \( (r = .16, \ p = .09) \). These results indicate that the three composite scores of the CASQ are the most significantly correlated measures of attributional style to depression scores on the CDI. Furthermore, these three composite scores of the CASQ also proved to be significantly correlated to the RCMAS. As well, the significance evidenced by the overall composite and approaching significance by the negative composite score of the SLES suggests its potential ability to predict anxiety scores on the RCMAS.

**Hypothesis 1: Validation of the SLES as a reliable measure of Attributional style in relation to the CASQ**

To test the hypothesis that the SLES was a concurrently valid measure of attributional style, pearson r correlation coefficients were computed to determine the relationship between CAVE ratings from the SLES (positive composite, negative composite, and overall composite) and attributional scores from the CASQ (positive composite, negative composite, and overall composite). Results indicated that the relationships between the positive, negative, and overall composite scores of the SLES to CASQ were positive (see Table 4). However, the correlations evidenced between the positive composite scores \( (r = .08, \ p = .41) \), negative composite scores \( (r = .02, \ p = .82) \),
and overall composite scores ($r = .07, p = .48$) of these measures indicate that the two instruments were not significantly related, contrary to predictions.

**Hypothesis 2: Real life events (SLES) as a more accurate measure of attributional style versus hypothetical life events (CASQ)**

To test the hypothesis that the real life events presented by children on the SLES would prove to be better measure of attributional style than the hypothetical events presented by the CASQ, Pearson $r$ correlation coefficients were computed and contrasted.

**Hypothesis 2A:** It was predicted that the relationship of the positive composite score of the SLES with the CDI would prove to be negatively related and significantly greater than the relationship of the positive composite score of the CASQ and the CDI. Results indicated that the correlation of the CDI to the positive composite score of the SLES was non-significant ($r = .07, p = .46$), while the correlation of the CDI to the CASQ was significant and in the predicted direction ($r = -.34, p < .005$) (see Table 5). These results indicate, contrary to this hypothesis, that the CASQ positive composite score was more highly related to depression than the positive composite score of the SLES.

**Hypothesis 2B:** It was predicted that the relationship of the negative composite score of the SLES with the CDI would prove to be positively related and significantly greater than the relationship of the negative composite score of the CASQ with the CDI.
Results indicated that the correlation of the CDI to the negative composite score of the SLES was nonsignificant ($r = -0.03, p = .74$), while the correlation of the CDI to the CASQ was significant and in the positive direction ($r = 0.27, p < .01$) (see Table 5). These results indicate that, contrary to the hypothesis, the CASQ negative composite score was more highly related to depression than the negative composite score of the SLES.

Hypotheses 3 & 4

To test the hypothesis that certain factors were able to differentially predict scores on measures of anxiety and depression, separate Maximum-R regression analyses were performed on the positive and negative composite scores of all three attributional measures (CASQ, SLES, CAVE ratings) and the three factors of the NASSQ (anxious cognitions, depressive cognitions, and negative affectivity cognitions scales) to achieve the model with the fewest number of predictor variables and greatest amount of variance accounted for. In this analysis there were nine predictor variables for depression and anxiety scores, respectively. Prior to conducting these analyses, however, pearson correlation coefficients were calculated for the nine predictor variables. Thus, correlations can be found in Table 6. As can be seen, strong correlations were evidenced between the positive and negative composite scores of the CASQ ($r = 0.78$), negative and overall composite scores of the CASQ ($r = -0.69$), anxious and negative affectivity cognitions of the NASSQ ($r = 0.83$), positive and overall scores of the SLES ($r = 0.70$), negative and overall composite scores of the SLES ($r = -0.66$), CAVE positive and overall
composite scores ($r = .67$) and CAVE negative and overall composite scores ($r = .60$).

See Tables 7 and 8 for the results of the maximum-R regression analyses.

**Hypothesis 3: Predictor variables of CDI depression ratings**

A six-factor model emerged during the max-r analysis as the best model to predict depression scores on the CDI. A subsequent regression analysis was performed with the six-factor model to reveal a moderate amount of variance ($R^2 = .52; F = 17.55, p < .005$) (see Table 9). Results of the regression revealed that five of the six factors were significant predictors of depression: CASQ positive composite score ($p < .01$), CASQ negative composite score ($p < .01$), SLES negative composite score ($p < .01$), NASSQ anxious cognitions score ($p = .001$), and NASSQ depressive cognitions score ($p < .01$).

The sixth variable, NASSQ negative affectivity cognitions score, was correlated at a non-significant albeit marginal level ($p = .07$). These results indicate that the positive and negative composite scores of the CASQ, in addition to the SLES negative composite score, and anxious cognitions and depressive cognitions scores of the NASSQ contribute a significant amount of variance to the six-factor model for predicting depression scores on the CDI.

**Hypothesis 4: Predictor variables of RCMAS anxiety ratings**

A five-factor model emerged during the max-r analysis as the best model to predict anxiety scores on the RCMAS. A subsequent regression analysis was performed
with the five-factor model to reveal a moderate amount of variance \(R^2 = .55; F = 24.40, p = .0001\) (see Table 10). Results of the regression revealed that three of the five factors were significant predictors of anxiety: NASSQ anxious cognitions score \(p < .01\), NASSQ depressive cognitions score \(p = .0001\), and NASSQ negative affectivity cognitions score \(p < .01\). The other two variables, CASQ positive composite score \(p = .105\) and the CASQ negative composite score \(p = .104\) evidenced non-significant contributions. These results indicate that the anxious, depressive, and negative affectivity cognitions scales of the NASSQ contributed a significant amount of variance to the five-factor model for predicting anxiety scores on the RCMAS.

**Exploratory Analyses**

To compare the relative utility of these two models as the differential predictors of anxiety and depression scores, additional regression analyses were computed and contrasted. Specifically, the six-variable model found to be useful in predicting CDI scores was applied to RCMAS scores, and the five-variable model found to be useful in predicting RCMAS scores was applied to CDI scores. Results from the analyses indicate that the five-variable model used for the RCMAS (CASQ positive and negative composite scores, NASSQ anxious, depressive, and negative affectivity cognitions scores) also revealed a moderate and significant amount of variance for predicting CDI scores \(R^2 = .45; F = 16.72, p = .0001\) (see Table 11). Further, the analysis revealed that four of the six variables were significant: CASQ positive composite score \(p < .05\),
CASQ negative composite score ($p < .05$), NASSQ anxious cognitions score ($p < .01$), and NASSQ depressive cognitions score ($p < .05$). These results indicate that the five-variable model accounts for 55% of the variance in predicting RCMAS scores, while only accounting for 45% of the variance with CDI scores. Although, somewhat more variance was accounted for in predicting anxiety, there is no large difference between the five-variable model to predict RCMAS scores over CDI scores.

Results of the six-variable regression analysis (for the CDI) performed on the RCMAS revealed a moderate but significant amount of variance ($R^2 = .55; F = 19.64, p = .0001$) (see Table 12). Further, the analysis revealed that four of the six variables were significant for predicting RCMAS scores: CASQ positive composite score ($p < .05$), NASSQ anxious cognitions score ($p < .005$), NASSQ depressive cognitions score ($p = .0001$), and NASSQ negative affectivity cognitions score ($p < .005$). Overall, these results indicate that the six-variable model accounts for 52% of the variance in predicting CDI scores, while accounting for 55% of the variance in predicting RCMAS scores. Although the six-variable model evidenced more variance in predicting RCMAS scores than CDI scores, the small margin of variance accounted for does not provide priority for using this model (to predict anxiety scores) versus the five-variable model.
Discussion

The purpose of this study was to examine attributions of life events made by normal middle school children, as well as to examine depressive and anxious cognitions (i.e., self-talk statements) made by children in relation to depression and anxiety. Results indicated that five of the six variables used to predict CDI scores were significant. Specifically, attributions and depressive and anxious cognitions were predictive of depression scores attained by participants on the CDI. As well, results demonstrated that three of the five variables used to predict RCMAS scores were significant. In particular, anxious, depressive, and negative affectivity cognitions proved to be significant predictors of anxiety scores attained by participants on the RCMAS. Thus, it appears that the children from this study evidenced similarities to adult populations in the expression of depression (Kovacs & Beck, 1977) and anxiety (Bell-Dolan & Last, 1990; Bell-Dolan & Wessler, 1994).

Further, another purpose of this study was to examine the efficacy of self-generated attributional statements (i.e., real life events) as a more accurate measure of attributional style versus questionnaire-oriented hypothetical statements. Researchers have raised questions concerning the validity of attributions elicited through hypothetical statements to state that these events, as presented by the questionnaire, may not be relevant to all individuals who make appraisals (Peterson et al., 1985; Peterson & Villanova, 1988).
Prior to conducting the preliminary analyses, descriptive statistics were computed for the CDI, RCMAS, NASSQ, and attributional measures. These statistics revealed interesting results about the participants in this study. For one, the mean of the CDI (7.89) and RCMAS (8.67) were considerably lower than expected for a nonclinical sample. These results indicate that the child participants of this study were exhibiting low levels of symptomatology, contrary to what was expected of this middle school sample. Further, participant responses on the NASSQ were somewhat low in comparison to what has been exhibited by middle school children in other NASSQ studies (Ronan et al., 1994). The CASQ evidenced a modest range of scores, while the positive, negative, and overall composite scores of the SLES and CAVE ratings evidenced a normal distribution in reference to the potential ranges. Thus, the participants "behaved" as a "super" normal sample on the CDI and RCMAS (i.e., displayed low levels of symptomatology), while displaying a full range of responses on the attributional measures of the CASQ (Bell-Dolan & Last, 1990) and CAVE ratings. Low scores on the CDI and RCMAS may have served to attenuate the relations between these variables and the attributional and cognitive measures.

Contrary to initial predictions, the CDI did not evidence a significant correlation with the depression scale of the NASSQ, but did correlate moderately with anxious and negative affectivity cognitions of this instrument. These results suggest a flaw in either the CDI or depression scale of the NASSQ to properly "tap" the depression construct; contrary to the results achieved in the Ronan et al.'s (1994) study in which the two scales
were significantly correlated. In addition, the moderate correlations evidenced by the CDI with the anxious and negative affectivity cognitions suggest, at least initially, that the CDI is more related to these cognitions than to depressed ones. The moderate correlation evidenced by the CDI with anxiety cognitions lends additional support to the notion that these constructs do in fact overlap (King et al., 1991; Norvell et al., 1985; Rodriguez & Routh, 1989). As well, the RCMAS was found not to correlate significantly with the depressive cognitions scale of the NASSQ, as predicted. Furthermore, the RCMAS was found to evidence moderate correlations with the anxious and negative affectivity cognitions of the NASSQ, as predicted. These results suggest that the RCMAS is contributing to the understanding and validation of the construct of anxiety, as evidenced by the moderate correlations with the anxious cognitions factor of the NASSQ. In addition, these results lend support to the notion that the RCMAS is also contributing to the understanding of the construct of negative affectivity, as evidenced by the moderate correlations with the negative affectivity cognitions factor of the NASSQ.

Contrary to the predicted hypothesis, the SLES composite scores (positive, negative, overall) were not significantly correlated with the CASQ composite scores (positive, negative, overall). These results fail to support the validity of the SLES, while failing to adequately address the concerns raised by researchers, interested in examining hypothetical versus real-life events (Peterson et al., 1985; Peterson & Villanova, 1988). One explanation for the lack of concurrent validity with this newly devised instrument resides in the fact that the children were asked to provide only one good and one bad life
event (for a total of two life events) on the SLES. Typically, the CAVE process (Peterson et al., 1983) requires that numerous life events be provided by the participant in order to achieve a reliable picture of an individual's attributional style across situations. Furthermore, the responses elicited from the children were frequently very brief. Representative responses on the SLES illustrate this issue. One child stated that the worst thing that had happened to him in the last three months was "getting in a fight" which happened because "we were arguing." Another child stated that the worst thing that had happened to her was "me and my friend got into a lot of fights" which happened because, "I don't know. They just happened over stuff." The events and attributions provided by the two children in the above examples demonstrate the lack of information and explanation needed, in order that valid CAVE ratings be properly made by raters. Thus, issues related to: 1) not eliciting enough events from the participants, as well as 2) not enough information to make proper CAVE ratings, should be addressed before future studies are conducted. Potential solutions to these problems are discussed later.

Furthermore, the SLES failed to prove its ability to be a better measure of attributional style in relation to the CDI. However, the CASQ positive and negative composite scores proved to be significantly correlated with the CDI, in the predicted direction, and similar to other research findings (Craighead, 1991; Curry & Craighead, 1990a; Rodriguez & Routh, 1989). Specifically, as internal, stable, and global attributions for good life events (positive composite) increased, CDI scores subsequently decreased, thus exhibiting the predicted negative relationship (i.e., negative attributional
style for good life events). Furthermore, as internal, stable, and global attributions increased for bad life events (negative composite), CDI scores increased (i.e., negative attributional style for bad life events). Thus, the positive and negative composite scores of the CASQ exhibited the ability to accurately capture the predicted relationships in relation to depression (i.e., CDI scores).

An examination of the ability of the three attributional measure scores (i.e., positive and negative composite) of the CASQ, SLES, and CAVE ratings, in addition to the three factors of the NASSQ (anxious, depressive, negative affectivity cognitions), to differentially predict scores on measures of anxiety and depression proved to be significant. In particular, the maximum-r regression analyses yielded six factors (CASQ-positive and negative composite scores, SLES-negative composite score, and NASSQ-anxious, depressive, and negative affectivity cognitions) as the model accounting for the most variance ($R^2 = .52$) in predicting depression scores on the CDI. Further results indicate that only five of the six variables were significant predictors of depression scores (CASQ-positive and negative composite scores, SLES-negative composite score, NASSQ-anxious and depressive cognitions). These findings lend support to Beck's cognitive theory of depression (1967), in that individuals suffering from symptoms of depression will engage in self-debilitating cognitions that often include a negative self-concept of self-blame and self-reproaches. As well, depressed individuals will often endorse cognitive distortions such as selective abstraction and magnification/minimization. Further, the fact that attributions contributed to the
prediction of depression affirms the view that depressed individuals have a tendency to "ruminate" about life events, in addition to having a "habitual tendency to offer the same sorts of explanations for diverse bad events", which can contribute to learned helplessness (Abramson et al., 1978).

Additionally, the maximum-r regression analyses produced five factors (CASQ-positive and negative composite scores, NASSQ-anxious, depressive, and negative affectivity cognitions) as the model accounting for the most variance in predicting anxiety scores on the RCMAS ($R^2 = .55$). Results indicated that only three of the five variables were significant predictors of anxiety scores (NASSQ-anxious, depressive, and negative affectivity cognitions). These findings lend support to Beck's theory of anxiety (1967) in that individuals suffering from symptoms of anxiety construct a system which often perpetuates their anxiety (i.e., cognitive content, operations, structures, and products). The predictive ability of anxious, depressive, and negative affectivity cognitions to determine anxiety scores on the RCMAS contributes to the notion that anxious individuals often engage in "self-talk." This "self-talk" is often made up of debilitating cognitions that hinder an individual's ability to maneuver through and/or deal with an anxiety-provoking situation.

Thus, it initially appears that attributional style, as well as anxious and depressive cognitions play an important role in predicting depression, while affirming the belief that depression is often characterized by debilitating cognitions and a tendency to endorse a negative attributional style which may lead to learned helplessness. However, it seems
that only anxious, depressive, and negative affect cognitions play an important role in predicting anxiety, while attributions fail to contribute any predictive utility. Thus, reaffirming the belief that anxiety is characterized by "self-talk" cognitions which are often negative.

In sum, results indicated that attributions and negative cognitions (anxious, depressive) are significant in predicting depression scores (as measured by the CDI). These findings lend support for the application of the adult model of depression (Beck, 1967) and attributional style (Abramson et al., 1978) to children/adolescents. Further, results indicated that negative cognitions (anxious, depressive, and negative affectivity) are significant in predicting anxiety scores (as measured by the RCMAS). These findings lend support to the application of the adult model of anxiety (Beck, 1967) to children/adolescents, based upon debilitating cognitions that often interfere with an anxious individual's ability to maneuver through anxiety-provoking situations. In addition, the SLES failed to be a concurrently valid measure of attributional style in comparison to the CASQ, or even prove itself as a better measure of depressive attributions in relation to the CDI. Potential solutions by which to improve this instrument will be discussed later. Finally, the CDI was found to be moderately correlated with the anxious and negative affectivity cognitions of the NASSQ, while evidencing a non-significant correlation with the depressive cognitions of the same instrument. The RCMAS evidenced moderate correlations with the anxious and negative
affectivity cognitions of the NASSQ, while also evidencing a low correlation with depressive cognitions of the NASSQ.

Furthermore, the additional regression analyses performed on the CDI and RCMAS, using the best model from the maximum-r regression analyses for the RCMAS and CDI scores, failed to account for any significant addition of variance in predicting anxiety and/or depression using these alternate models. Thus, it appears that the aforementioned six-factor model for predicting depression (CDI scores) and five-factor model for predicting anxiety (RCMAS scores) are the best models which account for the greatest predictive ability for these two constructs.

Descriptive analyses performed on the sex variable failed to be significant, with the exception of the negative composite score of the CAVE ratings. In addition, with the positive composite score of the CAVE ratings approaching significance, these results initially indicate that these two scales may be meaningful tools to help differentiate the attributional style of males from females. Although the focus of this project was not to examine sex differences, the utility of attributional ratings (as well as CAVE ratings) with male and female populations is an area that will be explored in future studies.

Limitations

When examining this study, there are certain limitations that need to be considered and taken into account. For one, a self-report instrument protocol inherently creates a situation of mono-method bias, which raises a potential question regarding the validity and accuracy of the results and their implications for other sources of
measurement. In an attempt to control for this limitation several steps were taken to ensure that the instrument administration process was standardized within the classroom, across classrooms within the same school, and between the two middle schools, to the best ability of the researchers involved. Initially, portions of the protocol were to be administered through an interview format. However, schedules of the participating schools and the anticipated number of participants for the study resulted in this procedure not being followed. Thus, despite this limitation, the results achieved are as valid and accurate as possible under the given circumstances.

Additionally, the high correlation evidenced between the two main dependent measures of the study (RCMAS and CDI; \( r = .79, p < .001 \)) raises the question of the discriminant validity of these two instruments, while supporting the hypotheses predicted in this study. However, these empirically validated measures have been used in numerous studies which have also found significantly high correlations to exist between them (Craighead, 1991; King et al., 1991; Norvell et al., 1985; Rodriguez & Routh, 1989). In fact, the large correlation exhibited lends validity to the theory of negative affectivity, or the belief that anxiety and depression are constructs that share numerous common features which reduce their discriminant abilities.

In addition, the distribution of CDI and RCMAS scores achieved with this sample (actual range) in relation to the potential range suggests that, on average, the participants of this study evidenced fewer anxious and depressive symptoms than normal non-clinical samples. Thus, the ability to make accurate conclusions concerning this sample or
generalize to other child populations is questionable. Of course, in order to test the parameters of the hypotheses of this study, it would be necessary to obtain a more representative community sample of children. In addition, it is suggested that the hypothesized relations be explored in future research projects with clinically anxious and depressive individuals.

Conclusion

The results of this study provide support for the notion that attributions are an important factor in predicting depression, while anxiety appears to be better predicted by the presence of negative cognitions (i.e., anxious, depressive, negative affect). However, taking the limitations into consideration (i.e., highly correlated CDI and RCMAS, mono-method bias) this issue of using attributional style to predict anxiety should not be abandoned. In fact, the documented presence of differences in attributional style between anxious and depressive children/adolescents in previous studies (cf. Rodriguez & Routh, 1989; Craighead, 1991; Laurent & Stark, 1993) suggests that this issue should be investigated further.

Additionally, the utility of "real-life" versus "hypothetical" attributions was not evidenced with the newly created SLES attributional style measure. In reference to the potential measurement difficulties of the SLES (i.e., only receiving two life events with which to perform the CAVE process), the issue of real life events eliciting a more reliable attributional style than hypothetical events should continue to be examined, as suggested by other researchers (Peterson et al., 1985; Peterson & Villanova, 1988). It is possible
that attempting to attain a more accurate measurement of real life events through a
questionnaire method is futile, when in fact, it would be better to measure "real-life
attributions" through a diagnostic cognitive/ attributional style interview process. It is
possible that creating a structured interview, consisting of specific questions which would
elicit numerous good and bad real-life events, would allow for a more precise
examination of attributions across various situations. In fact, the interview could be
devised in such a manner that would allow for a comparison of real-life versus
hypothetical events within the interview.

Additional child/adolescent studies are needed in order to confirm or disconfirm
the utility of attributions in predicting anxiety, the distinct or common areas of anxiety
and depression, and the ability to achieve a more accurate measure of attributional style
with real-life versus hypothetical life events. In fact, cross-sectional, longitudinal studies
would be heuristic in testing these hypotheses across varying populations/ages and time.
Further, additional studies need to be conducted with normal children/adolescents and
clinical children/adolescents classified according to four groups (anxious, depressed,
anxious and depressed, and normal controls) in order to test the aforementioned issues. It
is believed that examining these issues across the four identified groups could provide
important information for assessment techniques and treatment plans.
References


Tables
Table 1

Descriptive Statistics for the CDI, RCMAS, NASSQ, and Attributional measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>Stand. Dev.</th>
<th>Potential Range</th>
<th>Actual Range</th>
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<tbody>
<tr>
<td>CDI</td>
<td>7.89</td>
<td>6.85</td>
<td>0 - 54</td>
<td>0 - 34</td>
</tr>
<tr>
<td>RCMAS</td>
<td>8.67</td>
<td>6.93</td>
<td>0 - 28</td>
<td>0 - 27</td>
</tr>
<tr>
<td>Pos Com</td>
<td>11.92</td>
<td>2.80</td>
<td>0 - 24</td>
<td>6 - 19</td>
</tr>
<tr>
<td>Neg Com</td>
<td>9.67</td>
<td>2.41</td>
<td>0 - 24</td>
<td>3 - 17</td>
</tr>
<tr>
<td>Over Com</td>
<td>2.24</td>
<td>3.84</td>
<td>-24 - 24</td>
<td>-7 - 12</td>
</tr>
<tr>
<td>NASSQ</td>
<td>74.68</td>
<td>20.21</td>
<td>39 - 195</td>
<td>45 - 147</td>
</tr>
<tr>
<td>Ax scale</td>
<td>39.08</td>
<td>12.87</td>
<td>21 - 105</td>
<td>22 - 88</td>
</tr>
<tr>
<td>Dp scale</td>
<td>17.38</td>
<td>3.65</td>
<td>8 - 40</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Neg Aff</td>
<td>18.22</td>
<td>6.18</td>
<td>10 - 50</td>
<td>10 - 39</td>
</tr>
<tr>
<td>BE</td>
<td>9.23</td>
<td>2.69</td>
<td>3 - 15</td>
<td>3 - 15</td>
</tr>
<tr>
<td>WE</td>
<td>8.23</td>
<td>2.58</td>
<td>3 - 15</td>
<td>3 - 15</td>
</tr>
<tr>
<td>Diff Score</td>
<td>.98</td>
<td>3.57</td>
<td>-12 - 12</td>
<td>-8 - 11</td>
</tr>
<tr>
<td>CAVE-B</td>
<td>8.95</td>
<td>2.94</td>
<td>3 - 15</td>
<td>3 - 15</td>
</tr>
<tr>
<td>CAVE-W</td>
<td>8.26</td>
<td>2.70</td>
<td>3 - 15</td>
<td>3 - 14</td>
</tr>
<tr>
<td>CAVE-D</td>
<td>.66</td>
<td>3.58</td>
<td>-12 - 12</td>
<td>-8 - 8</td>
</tr>
</tbody>
</table>

Pos Com = positive composite score of the CASQ
Neg Com = negative composite score of the CASQ
Over Com = Overall composite score of the CASQ
Ax scale = anxiety scale of the NASSQ
Dp scale = depression scale of the NASSQ
Neg Aff = negative affect scale of the NASSQ
BE = best events scale (i.e., positive composite scale) of the SLES
WE = worst events scale (i.e., negative composite scale) of the SLES
Diff Score = difference score (i.e., overall composite) of the SLES
CAVE-B = best events scale (i.e., positive composite) of CAVE ratings
CAVE-W = worst events scale (i.e., negative composite) of CAVE ratings
CAVE-D = difference score (i.e., overall composite) of CAVE ratings
Table 2

**Correlations between CDI, RCMAS and NASSQ factors (Anxiety, Depression, Negative Affect)**

<table>
<thead>
<tr>
<th></th>
<th>Ax scale</th>
<th>Dp scale</th>
<th>Neg Aff</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDI</td>
<td>.595*</td>
<td>.050</td>
<td>.538*</td>
</tr>
<tr>
<td>RCMAS</td>
<td>.653*</td>
<td>.028</td>
<td>.638*</td>
</tr>
</tbody>
</table>

*p < .001

Ax scale = anxiety scale of the NASSQ
Dp scale = depression scale of the NASSQ
Neg Aff = negative affect scale of the NASSQ

Table 3

**Correlations between CDI, RCMAS, and positive, negative, overall composite scores of the CASQ, SLES, and CAVE-ratings**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDI</td>
<td>- .338****-.270****-.415****-.016 .026</td>
<td>-.050 .074</td>
<td>-.034</td>
<td>.113</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCMAS</td>
<td>-.309** .241* -.376****-.097 .164</td>
<td>-.194* .024</td>
<td>.008</td>
<td>.007</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05
**p < .01
***p < .005
****p < .001

1 = positive composite score of the CASQ
2 = negative composite score of the CASQ
3 = Overall composite score of the CASQ
4 = best events scale (i.e., positive composite scale) of the SLES
5 = worst events scale (i.e., negative composite scale) of the SLES
6 = difference score (i.e., overall composite) of the SLES
7 = best events scale (i.e., positive composite) of CAVE ratings
8 = worst events scale (i.e., negative composite) of CAVE ratings
9 = difference score (i.e., overall composite) of CAVE ratings
Table 4

Hypothesis 1:

Correlations of CAVE-ratings (i.e., positive, negative, overall composite scores) with CASQ attributional ratings

<table>
<thead>
<tr>
<th></th>
<th>CAVE-B</th>
<th>CAVE-W</th>
<th>CAVE-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pos com</td>
<td>.082</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Neg com</td>
<td>---</td>
<td>.023</td>
<td>---</td>
</tr>
<tr>
<td>Over com</td>
<td>---</td>
<td>---</td>
<td>.073</td>
</tr>
</tbody>
</table>

Pos Com = positive composite score of the CASQ  
Neg Com = negative composite score of the CASQ  
Over Com = Overall composite score of the CASQ  
CAVE-B = best events scale (i.e., positive composite) of CAVE ratings  
CAVE-W = worst events scale (i.e., negative composite) of CAVE ratings  
CAVE-D = difference score (i.e., overall composite) of CAVE ratings

Table 5

Hypothesis 2A & 2B:

Correlations of the SLES and CASQ with the CDI; positive and negative composite scores

<table>
<thead>
<tr>
<th></th>
<th>CAVE-B</th>
<th>CAVE-W</th>
<th>Pos com</th>
<th>Neg com</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDI</td>
<td>.074</td>
<td>-.034</td>
<td>-.338*</td>
<td>.270**</td>
</tr>
</tbody>
</table>

*p < .005  
**p < .01

CAVE-B = best events scale (i.e., positive composite) of CAVE ratings  
CAVE-W = worst events scale (i.e., negative composite) of CAVE ratings  
Pos Com = positive composite score of the CASQ  
Neg Com = negative composite score of the CASQ
Table 6

Correlations between Attributional Composite Scores (CASQ, SLES, CAVE-ratings) and NASSQ-factors (Anxiety, Depression, Negative Affectivity)

<table>
<thead>
<tr>
<th></th>
<th>Pos</th>
<th>Neg</th>
<th>Over</th>
<th>BE</th>
<th>WE</th>
<th>DS</th>
<th>CAVE-B</th>
<th>CAVE-W</th>
<th>CAVE-D</th>
<th>Anx</th>
<th>Dep</th>
<th>Neg Aff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neg</td>
<td>-0.084</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over</td>
<td>0.781</td>
<td>-0.688</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BE</td>
<td>0.092</td>
<td>0.031</td>
<td>0.045</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WE</td>
<td>-0.106</td>
<td>0.197</td>
<td>-0.201</td>
<td>0.075</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS</td>
<td>0.142</td>
<td>-0.136</td>
<td>0.187</td>
<td>0.696</td>
<td>-0.663</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>CAVE-B</td>
<td>0.082</td>
<td>0.018</td>
<td>0.046</td>
<td>0.309</td>
<td>-0.025</td>
<td>0.266</td>
<td></td>
<td></td>
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<tr>
<td>CAVE-W</td>
<td>-0.067</td>
<td>0.023</td>
<td>-0.063</td>
<td>-0.125</td>
<td>0.262</td>
<td>-0.283</td>
<td>0.190</td>
<td></td>
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<tr>
<td>CAVE-D</td>
<td>0.105</td>
<td>0.000</td>
<td>0.073</td>
<td>0.363</td>
<td>-0.227</td>
<td>0.461</td>
<td>0.673</td>
<td>-0.598</td>
<td></td>
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<tr>
<td>Anx</td>
<td>-0.236</td>
<td>0.190</td>
<td>-0.293</td>
<td>-0.016</td>
<td>0.265</td>
<td>-0.156</td>
<td>0.041</td>
<td>0.019</td>
<td>0.031</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dep</td>
<td>0.037</td>
<td>-0.063</td>
<td>0.067</td>
<td>0.009</td>
<td>0.011</td>
<td>-0.004</td>
<td>0.027</td>
<td>-0.009</td>
<td>0.031</td>
<td>0.428</td>
<td></td>
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</tr>
<tr>
<td>Neg Aff</td>
<td>-0.177</td>
<td>0.123</td>
<td>-0.207</td>
<td>-0.023</td>
<td>0.247</td>
<td>-0.188</td>
<td>0.019</td>
<td>-0.058</td>
<td>0.044</td>
<td>0.831</td>
<td>0.421</td>
<td></td>
</tr>
</tbody>
</table>

Pos = positive composite score of the CASQ  
Neg = negative composite score of the CASQ  
Over = overall composite score of the CASQ  
BE = positive composite score of the SLES  
WE = negative composite score of the SLES  
DS = overall composite score of the SLES  
CAVE-B = positive composite score of CAVE-ratings  
CAVE-W = negative composite score of CAVE-ratings  
CAVE-D = overall composite score of CAVE-ratings  
Anx = anxious cognitions of the NASSQ  
Dep = depressive cognitions of the NASSQ  
Neg Aff = negative affectivity cognitions of the NASSQ
Table 7

Hypothesis 3:

**Maximum-R² (variance) Analysis for Predictors of CDI (Depression) scores**

<table>
<thead>
<tr>
<th>Vars</th>
<th>R-sq</th>
<th>R-sq</th>
<th>C-p</th>
<th>s</th>
<th>m</th>
<th>m</th>
<th>E</th>
<th>E</th>
<th>B</th>
<th>W</th>
<th>e</th>
<th>e</th>
<th>f</th>
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<tbody>
<tr>
<td>1</td>
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<td>31.2</td>
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</tr>
<tr>
<td>2</td>
<td>42.9</td>
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<td>4.9352</td>
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<tr>
<td>4</td>
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Pos Com = positive composite score of the CASQ  
Neg Com = negative composite score of the CASQ  
BE = best events scale (i.e., positive composite scale) of the SLES  
WE = worst events scale (i.e., negative composite scale) of the SLES  
CAVE-B = best events scale (i.e., positive composite) of CAVE ratings  
CAVE-W = worst events scale (i.e., negative composite) of CAVE ratings  
Ax scale = anxiety scale of the NASSQ  
Dp scale = depression scale of the NASSQ  
Neg Aff = negative affect scale of the NASSQ
Table 8

Hypothesis 4:

**Maximum- \( R^2 \) (variance) Analysis for Predictors of RCMAS (Anxiety) scores**

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</table>

**Abbreviations:**

- **Pos Com** = positive composite score of the CASQ
- **Neg Com** = negative composite score of the CASQ
- **BE** = best events scale (i.e., positive composite scale) of the SLES
- **WE** = worst events scale (i.e., negative composite scale) of the SLES
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- **CAVE-W** = worst events scale (i.e., negative composite) of CAVE ratings
- **Ax** = anxiety scale of the NASSQ
- **Dp** = depression scale of the NASSQ
- **Neg Aff** = negative affect scale of the NASSQ
Table 9

Hypothesis 3:

**Predictor Variables of CDI Depression Ratings: Six-Factor Model Regression Analysis**

\[
\text{CDI} = 7.35 - 0.525 \text{ Pos com} + 0.575 \text{ Neg com} - 0.663 \text{ WE} + 0.259 \text{ Ax scale} - 0.469 \text{ Dp scale} + 0.268 \text{ Neg aff}
\]

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Coef</th>
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<th>t-ratio</th>
<th>p</th>
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<tr>
<td>Ax scale</td>
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s = 4.843  R-sq = 55.0%  R-sq(adj) = 51.9%

**Analysis of Variance**

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</table>

*Pos Com = positive composite score of the CASQ*
*Neg Com = negative composite score of the CASQ*
*WE = worst events scale (i.e., negative composite score) of the SLES*
*Ax scale = anxiety scale of the NASSQ*
*Dp scale = depression scale of the NASSQ*
*Neg Aff = negative affect scale of the NASSQ*
Table 10

Hypothesis 4:

**Predictor Variables of RCMAS Anxiety Ratings: Five-Factor Model Regression Analysis**

\[
\text{RCMAS} = 2.26 - 0.286 \text{Pos com} + 0.332 \text{Neg com} + 0.220 \text{Ax scale} - 0.574 \text{Dp scale} \\
+ 0.445 \text{Neg aff}
\]

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s = 4.701    R-sq = 57.3%  R-sq(adj) = 54.9%

**Analysis of Variance**

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Pos Com = positive composite score of the CASQ
Neg Com = negative composite score of the CASQ
Ax scale = anxiety scale of the NASSQ
Dp scale = depression scale of the NASSQ
Neg Aff = negative affect scale of the NASSQ

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Table 11

Predictor Variables of RCMAS anxiety Ratings: Six-Factor Model Regression Analysis

RCMAS = 4.37 - 0.366 Pos com + 0.358 Neg com - 0.154 WE + 0.217 Ax scale
- 0.573 Dp scale + 0.440 Neg aff

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s = 4.681      R-sq = 57.8%    R-sq(adj) = 54.9%

Analysis of Variance

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<td>92</td>
<td>4465.96</td>
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Pos Com = positive composite score of the CASQ
Neg Com = negative composite score of the CASQ
WE = worst events scale (i.e., negative composite scale) of the SLES
Ax scale = anxiety scale of the NASSQ
Dp scale = depression scale of the NASSQ
Neg Aff = negative affect scale of the NASSQ
Table 12

**Predictor Variables of CDI depression Ratings: Five-Factor Model Regression Analysis**

CDI = 1.99 - 0.454 Pos com + 0.495 Neg com + 0.228 Ax scale - 0.389 Dp scale
+ 0.244 Neg aff

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s = 5.137    R-sq = 47.9%    R-sq(adj) = 45.0%

**Analysis of Variance**

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Pos Com = positive composite score of the CASQ  
Neg Com = negative composite score of the CASQ  
Ax scale = anxiety scale of the NASSQ  
Dp scale = depression scale of the NASSQ  
Neg Aff = negative affect scale of the NASSQ
Appendices
Appendix A

Initial Letter to Parents Explaining the Nature of the Study
Letter to Parent or Guardian

Dear Parent or Guardian,

We are currently conducting a project examining the adjustment of middle school students. As you know, early adolescence is a time of change and growth. This research is a thesis project being conducted by Devin A. Byrd, a graduate student in clinical psychology, under the supervision of Dr. Thomas H. Ollendick, a licensed clinical psychologist and professor of psychology at Virginia Tech. The principal of your child’s school has also approved this project. It is becoming more and more clear that some middle school students experience anxiety-like and/or depression-like symptoms during this time period. We are hoping to gain insight to the factors that contribute to the expression of these symptoms and would greatly appreciate you and your child's participation in the current project.

To participate in this project, your child will be asked to complete seven questionnaires with other students on two separate days. The questionnaires will be administered during the school day at a time approved by the principal. The questionnaires deal with your child's experience of anxious and depressive symptoms that may characterize his or her adjustment. It will take approximately 45 minutes for your child to complete the questionnaires each day. In addition, we are asking you to complete a questionnaire concerning your son/daughter's behaviors and participation in school/non-school activities. The sessions will be conducted by Mr. Byrd as well as other graduate and undergraduate students studying psychology.

We will provide you and all other parents a brief summary of the findings. However, to maintain confidentiality that we will be promising your son/daughter, we will not be able to provide you with detailed feedback about his or her specific responses, unless, we have reason to believe that he/she is at risk of hurting him or herself or that he/she is being hurt by others. In this case, we will contact you and provide information concerning his/her responses on the questionnaires as well as information on treatment services available to you.

As is true of all research project conducted at your child's school, your son/daughter is free to discontinue participation at any time. Similarly, if you choose to discontinue participation at any time, you are welcome to do so. This project has been approved by the Human Subjects Research Committee and the Institutional Review Board at Virginia Tech, as is required of all projects conducted by Virginia Tech students and faculty. If you have any questions, please feel free to call Devin Byrd (951-9781-home or 231-6914-clinic); Dr. Thomas Ollendick (231-6451), licensed clinical psychologist, professor of psychology, faculty advisor; Richard Eisler (231-7001), Human Subjects Chair; Ernest Stout (231-9359), Institutional Review Board Chairperson.

Enclosed, please find a permission form for you and your child to participate in this project. On the form, please indicate whether you agree to participate or not. It is important that the form be returned, regardless of your decision to participate or not to participate. Your child will receive a coupon to redeem at one of the local merchants simply for returning the permission form. Please return the parent permission form and the adolescent assent form to your child’s school in the enclosed envelope.

Also enclosed is a copy of the parent questionnaire. Please return this form in the self-addressed stamped envelope which is enclosed. If you decide not to participate, simply return the form to us. However, if you do choose to participate, kindly complete the form for us. We would greatly appreciate both you and your child’s participation, as it will help us to better understand child/adolescent adjustment during this critical period. Thank you in advance.

Sincerely,

Devin A. Byrd, B.S.
Graduate Clinician

Thomas H. Ollendick, Ph.D.
Licensed Clinical Psychologist
Professor of Psychology
Supervisor/Faculty Advisor

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Appendix B

Parent Consent Form
Parent consent

Title of Project: Adjustment in middle school students: An examination of anxious and depressive symptoms.

Investigators: Devin A. Byrd and Thomas H. Ollendick

I. Purpose of study

The purpose of this study is to examine the adjustment of middle school students and related anxious and depressive symptoms that might occur during this time period of early adolescence. Additionally, we are interested in how young adolescents explain life events which occur to them.

II. Procedures

Your child's involvement in the project will involve two sessions (during school) which will last approximately 45 minutes each. Specifically, your child will be asked to: 1) complete several questionnaires, during both sessions, dealing with the thoughts and feelings some middle school students have when they are feeling anxious or sad, and 2) give her/his consent to participate in the study by signing the adolescent assent form.

Parents' participation will involve: 1) completing the enclosed questionnaire which deals with activities and behaviors that your son/daughter may be expressing and 2) giving permission for your child and yourself to participate in the study by signing the informed consent.

Before any questionnaires are given to your son or daughter during the sessions, she/he will be informed about the nature of the current study and any questions, comments, or concerns will be attended to.

III. Risks

There is a possibility that your child may recount a bad life experience that has happened in the last three months, which may cause her/him some level of discomfort; however, your son or daughter has the option to discontinue participation in the study at any time and will be made fully aware of his/her personal right to do so. If your child should express responses that are of concern to us, immediate feedback concerning the nature of our concerns and a list of referral sources will be made available to you (as we mentioned in the cover letter to you).

IV. Benefits of this project

Your participation in this project will help to increase our understanding of adjustment in middle school students, the expression of anxiety-like and/or depression-like symptoms, and the way in which adolescents explain life events that occur to them. Further, I (a graduate student in clinical psychology at Virginia Tech) will be available throughout and after the completion of the study in case you have any questions. Dr. Thomas H. Ollendick, a licensed clinical psychologist and professor of psychology at Virginia Tech, will also be available for this purpose. No promises or guarantee of benefits are being made to encourage you to participate.

V. Extent of Anonymity and Confidentiality

The results of this study will be kept strictly confidential. Researchers will not release the results to anyone without your written consent, except in the case where your child has indicated that she/he may hurt herself/himself or someone else. In such instances, you will be directly informed of this. The information provided by your child will have his/her name removed and only a subject number will identify him/her during analyses and write-up of the research.

VI. Compensation

You as the parent(s) or guardian(s) will be sent a thank you letter for participating in the study and a brief summary of the findings of the study. In addition, your adolescent will receive a coupon to redeem at one of the local merchants for his/her consideration of this project.
VII. Freedom to Withdraw
You and your child are free to withdraw from participation in this study at any time without penalty. Further, you and your child are free not to answer any questions that you choose without penalty.

VIII. Approval of Research
This research project has been approved, as required, by the Institutional Review Board for Research Involving Human Subjects at Virginia Polytechnic Institute and State University and by the Department of Psychology at Virginia Polytechnic Institute and State University. Further, the Montgomery County School System has approved this project along with Mr. Bullock, Christiansburg Middle School.

IX. Subject's Responsibilities
I voluntarily agree to participate in this study. I have the following responsibilities:
- give permission for my son or daughter to participate
- complete and return the Child Behavior Checklist parent form

X. Subject's Permission
I have read and understand the informed consent and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent for participation in this project.

If I participate, I may withdraw at any time without penalty. I agree to abide by the rules of this project.

I agree to participate in the study.

______________________________  _____________
Signature  Date

I wish not to participate in the study.

______________________________  _____________
Signature  Date

Should I have any questions about this research or its conduct, I may contact:

Devin Byrd, Principal Investigator.................951-9781(H) and 231-6914

Thomas, H. Ollendick, Faculty Advisor.........231-6451 (office)

Richard M. Eisler, Human Subjects Chair......231-7001 (office)

E. R. Stout, Chair, IRB, Research Division.....231-9359 (office)
Appendix C

Child/Adolescent Consent Form
Adolescent Assent Form

You have been invited to take part in a study about how adolescents experience different type of feelings. If you agree to be in the study, you will complete several questionnaires about your feelings (such as being sad or nervous) on two separate days. These questionnaires will take about 45-minutes to fill out on both days. In addition, your parents will also be giving us information about you. All of your answers will be kept confidential unless we think that you may hurt yourself or someone else or if we believe that someone is hurting you. Except for these answers, your answers will only be told to the people working on the study.

If you have any questions or if anything upsets you, you may talk with me and I will answer questions you have. You can decide that you do not want to answer any questions. Even if you decide to be in the study, you may stop at any time you do not wish to continue to participate. If you decide to discontinue, please inform me and I will inform your teacher. If you decide to discontinue because you are upset about the questions, I will inform your counselor so that she or he may talk with you. Remember, by choosing to be in the study, you will help us understand different feelings that adolescents have. If you have any questions after the study is finished, you may call Devin Byrd at 951-9781 or 231-6914 or Dr. Thomas Ollendick at 231-6451.

"I agree to be in the study"

__________________________  __________________________
Signature                        Date

"I don't want to be in the study"

__________________________  __________________________
Signature                        Date
Appendix D

Children’s Depression Inventory (CDI)
CD INVENTORY

M. Kovacs

Name________________________ Age_________ Date_____________________

DIRECTIONS: Kids sometimes have different feelings and ideas. This form lists the feelings and ideas in groups. From each group, pick One sentence that describes you best for the past two weeks. After you pick a sentence from the first group, go on to the next group. There is no right or wrong answer. Just pick the sentences that best describe the way you have been recently. Put a mark like this - X - next to your answer. Put the X on the line next to the sentence that you pick.

Here is an example of how this form works. Try it. Put a mark next to the sentence that describes you best:

___ I read books all the time
___ I read books once in a while
___ I never read books

Remember, pick out the sentence that describes your feelings and ideas in the past two weeks.

1. ___ I am sad once in a while
   ___ I am sad many times
   ___ I am sad all the time

2. ___ Nothing will ever work out for me
   ___ I am not sure if things will work out for me
   ___ Things will work out for me O.K.

3. ___ I do most things O.K.
   ___ I do many things wrong
   ___ I do everything wrong

4. ___ I have fun in many things
   ___ I have fun in some things
   ___ Nothing is fun at all

5. ___ I am bad all the time
   ___ I am bad many times
   ___ I am bad once in a while

6. ___ I think about bad things happening to me one in a while
   ___ I worry that bad things will happen to me
   ___ I am sure that terrible things will happen to me

7. ___ I hate myself
   ___ I do not like myself
   ___ I like myself

75
8. ___ All bad things are my fault
     ___ Many bad things are my fault
     ___ Bad things are not usually my fault

9. ___ I do not think about killing myself
     ___ I think about killing myself but I would not do it
     ___ I want to kill myself

10. ___ I feel like crying everyday
     ___ I feel like crying many days
     ___ I feel like crying once in a while

11. ___ Things bother me all the time
     ___ Things bother me many times
     ___ Things bother me once in a while

12. ___ I like being with people
     ___ I do not like being with people many times
     ___ I do not want to be with people at all

13. ___ I cannot make up my mind about things
     ___ It is hard to make up my mind about things
     ___ I make up my mind about things easily

14. ___ I look O.K.
     ___ There are some bad things about my looks
     ___ I look ugly

15. ___ I have to push myself all the time to do my schoolwork
     ___ I have to push myself many times to do my schoolwork
     ___ Doing schoolwork is not a big problem

16. ___ I have trouble sleeping every night
     ___ I have trouble sleeping many nights
     ___ I sleep pretty well

17. ___ I am tired once in a while
     ___ I am tired many days
     ___ I am tired all the time

18. ___ Most days I do not feel like eating
     ___ Many days I do not feel like eating
     ___ I eat pretty well

19. ___ I do not worry about aches and pains
     ___ I worry about aches and pains many times
     ___ I worry about aches and pains all the time

20. ___ I do not feel alone
     ___ I feel alone many times
     ___ I feel alone all the time
21. ___ I never have fun at school
   ___ I have fun at school only once in a while
   ___ I have fun at school many times

22. ___ I have plenty of friends
   ___ I have some friends but I wish I had more
   ___ I do not have any friends

23. ___ My school work is all right
   ___ My school work is not as good as before
   ___ I do very badly in subjects I used to be good in

24. ___ I can never be as good as other kids
   ___ I can be as good as other kids if I want to
   ___ I am just as good as other kids

25. ___ Nobody really loves me
   ___ I am not sure if anybody loves me
   ___ I am sure that somebody loves me

26. ___ I usually do what I am told
   ___ I do not do what I am told most times
   ___ I never do what I am told

27. ___ I get along with people
   ___ I get into fights many times
   ___ I get into fights all the time
Appendix E

Revised-Children’s Manifest Anxiety Scale (RCMAS)
WHAT I THINK AND FEEL

School

Name

Grade Age

Girl Boy

Directions: Read each question carefully. Put a circle around the word YES if you think it is true about you. Put a circle around the word NO if you think it is not true about you.

YES NO 1. I have trouble making up my mind.

YES NO 2. I get nervous when things do not go the right way for me.

YES NO 3. Others seem to do things easier than I can.

YES NO 4. I like everyone I know.

YES NO 5. Often I have trouble getting my breath.

YES NO 6. I worry a lot of the time.

YES NO 7. I am afraid of a lot of things.

YES NO 8. I am always kind.

YES NO 9. I get mad easily.

YES NO 10. I worry about what my parents will say to me.

YES NO 11. I feel that others do not like the way I do things.

YES NO 12. I always have good manners.

YES NO 13. It is hard for me to get to sleep at night.

YES NO 14. I worry about what other people think about me.

YES NO 15. I feel alone when there are people with me.

YES NO 16. I am always good.
17. Often I feel sick in my stomach.
18. My feelings get hurt easily.
19. My hands feel sweaty.
20. I am always nice to everyone.
21. I am tired a lot.
22. I worry about what is going to happen.
23. Other children are happier than I.
24. I tell the truth every single time.
25. I have bad dreams.
26. My feelings get hurt easily when I am fussed at.
27. I feel someone will tell me I do things the wrong way.
28. I never get angry.
29. I wake up scared some of the time.
30. I worry when I go to bed at night.
31. It is hard for me to keep my mind on my school work.
32. I never say things I shouldn't.
33. I wiggle in my seat a lot.
34. I am nervous.
35. A lot of people are against me.
36. I never lie.
37. I often worry about something bad happening to me.
Appendix F

Children’s Attributional Style Questionnaire (CASQ)
Kastan-Revised Attributional Style Questionnaire (Kastan-R ASQ)

1. You get an "a" on a test.
   A. I am smart.
   B. I am good in the subject that the test was in.

2. You play a game with some friends and you win.
   A. No one I know plays that game well.
   B. I play that game well.

3. You spend a night at a friend's house and you have a good time.
   A. My friend was in a friendly mood that night
   B. Everyone in my friend's family was in a friendly mood that night

4. You go on a vacation with a group of people and you have fun.
   A. I was in a good mood
   B. The people I was with were in good moods.

5. All of your friends catch a cold except you.
   A. I have been healthy lately.
   B. I am a healthy person.

6. Your pet gets run over by a car.
   A. I don't take good care of my pets.
   B. Drivers are not cautious enough.

7. Some kids that you know say that they do not like you.
   A. Once in a while people are mean to me.
   B. Once in a while I am mean to other people.

8. You get very good grades.
   A. School work is simple.
   B. I am a hard worker.

9. Your friend tells you that he likes you.
   A. My friend liked the way I looked today.
   B. My friend likes the way I look.

10. A good friend tells you that he hates you.
    A. My friend was in a bad mood that day.
    B. I wasn't nice to my friend that day.

11. You tell a joke and no one laughs.
    A. I don't tell jokes well.
    B. The joke is so well-known that it is no longer funny.

12. Your teacher gives a lesson and you do not understand it.
    A. I didn't pay attention to anything that day.
    B. I didn't pay attention when my teacher was talking.
   A. Teachers make hard tests.
   B. Sometimes teachers make hard tests.

14. You gain a lot of weight and start looking fat.
   A. The food that I have to eat is fattening.
   B. I like fattening foods.

15. A person steals money from you.
   A. That person is dishonest.
   B. People are dishonest.

16. Your parents praise something that you make.
   A. I am good at making somethings.
   B. My parents like some things I make.

17. You play a game and you win money.
   A. I am a lucky person.
   B. I am lucky when I play games.

18. You break a glass.
   A. I am not careful enough.
   B. Sometimes I am not careful enough.

19. You are invited to a lot of parties.
   A. A lot of people have been acting friendly towards me lately.
   B. I have been acting friendly toward a lot of people lately.

20. A grownup yells at you.
   A. That person yelled at the first person he saw.
   B. That person yelled at a lot of people he saw that day.

21. You do a project with a group of kids and it turns out badly.
   A. I don't work well with the people in the group.
   B. I never work well with a group.

22. You make a new friend.
   A. I am a nice person.
   B. The people that I meet are nice.

23. You have been getting along well with your family.
   A. I am easy to get along with when I am with my family.
   B. Once in a while I am easy to get along with when I am with my family.

24. You try to sell candy but no one will buy any.
   A. Lately a lot of children are selling things, so people don't want to buy anything else from children.
   B. People don't like to buy things from children.
25. You put a hard puzzle together.
   A. Sometime I am good at putting puzzles together.
   B. Sometimes I am good at putting things together.

26. You get a bad grade in school.
   A. I am stupid.
   B. Teachers are unfair graders.

27. You walk into a door and get a bloody nose.
   A. I wasn't looking where I was going.
   B. I have been careless lately.

28. You have a messy room.
   A. I did not clean my room that day.
   B. I usually do not clean my room.

29. You twist your ankle in gym class.
   A. The past few weeks the sports we played in gym class have been dangerous.
   B. The past few weeks I have been clumsy in gym class.

30. Your parents take you to the beach and you have a good time.
   A. Everything at the beach was nice that day.
   B. The weather at the beach was nice that day.

31. You take a bus which arrives so late that you miss a movie.
   A. The past few days there have been problems with the bus being on time.
   B. The buses are almost never on time.

32. Your mother makes you your favorite dinner.
   A. There are a few things my mother will do to please me.
   B. My mother like to please me.

33. A team that you are on loses a game.
   A. The team members don't play well together.
   B. That day the team members didn't play well together.

34. You finish your homework quickly.
   A. Lately I have been doing everything quickly.
   B. Lately I have been doing schoolwork quickly.

35. Your teacher asks you a question and you give the wrong answer.
   A. I get nervous when I have to answer questions.
   B. That day I got nervous when I had to answer questions.

36. You don't get your chores done at home.
   A. I was lazy that day.
   B. Many days I am lazy.
37. You go to an amusement park and you have a good time.
   A. I usually enjoy myself at amusement parks.
   B. I usually enjoy myself.

38. You have a fight with a friend.
   A. I was in a bad mood that day.
   B. My friend was in a bad mood that day.

39. You get all the toys you want on your birthday.
   A. People always guess what toys to buy me for my birthday.
   B. This birthday people guessed right as to what toys I wanted.

40. You go to a friend's party and you have fun.
   A. Your friend gives good parties.
   B. Your friend gave a good party that day.

41. Your neighbors ask you over for dinner.
   A. Sometimes people are in kind moods.
   B. People are kind.

42. You have a substitute teacher and she likes you.
   A. I was well-behaved during class that day.
   B. I am almost always well-behaved during class.

43. You make your friends happy.
   A. I am a fun person to be with.
   B. Sometimes I am a fun person to be with.

44. You get free ice cream cone.
   A. I was friendly to the ice cream man that day.
   B. The ice cream man was feeling friendly that day.

45. At your friend's party the magician asks you to help him out.
   A. It was just luck that I got picked.
   B. I looked really interested in what was going on.

46. You try to convince a kid to go to the movies with you, but he won't go.
   A. That day he did not feel like doing anything.
   B. That day he did not feel like going to the movies.

47. Your parents have a big fight.
   A. It is hard for people to get along well.
   B. It is hard for people who are married to get along well.

48. You have been trying to get into a club and you don't get in.
   A. There are a lot of things that I am not good at.
   B. I am not good at the things that people in the club do.
Appendix G

Specific Life Events Schedule (SLES)
Specific Life Events Schedule (SLES)

Everybody has good and bad things that happen to them during their life. Sometimes these things are a result of things we do personally and sometimes these things happen because of someone or something else. As well, these good and/or bad things may happen once, or frequently and they may affect one or many aspects or situations in our lives.

On the two Life Events Sheets, we would like you to choose two different events (one good and one bad) and tell us about these events. There are no right or wrong answers, and no specific way in which you should answer. Please take a few minutes to think of two things (one good and one bad) that have happened to you personally in the last three months. Remember to be as descriptive as possible when writing about the events and tell us why they happened and how they affected you.
BRIEFLY DESCRIBE THE BEST THING THAT HAS HAPPENED TO YOU PERSONALLY IN THE LAST THREE MONTHS:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Why did this happen? Write it down for me and describe it in detail. You may use the back of this sheet if necessary.

THIS THING HAPPENED BECAUSE:_____________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

In the next section, please read the questions carefully and circle one number that best describes your answer.

1) Was this thing caused by someone (or something) else or was it caused by something you did?
   1  2  3  4  5
   someone(thing) else  myself & someone(thing) else  caused by what I did

2) Do you think the cause of what happened to you will ever happen again, or did it just happen this once?
   1  2  3  4  5
   will never happen again  may happen again  will definitely happen again

3) Does the cause of what happened just influence this one thing, or will it also influence other things in your life?
   1  2  3  4  5
   influences only this one thing  influences some situations, but not all  influences all things in my life

4) How important was this thing that happened to you?
   1  2  3  4  5
   not at all important  somewhat important  very important
BRIEFLY DESCRIBE THE WORST THING THAT HAS HAPPENED TO YOU PERSONALLY IN THE LAST THREE MONTHS:

Why did this happen? Write it down for me and describe it in detail. You may use the back of this sheet if necessary.

THIS THING HAPPENED BECAUSE:

In the next section, please read the questions carefully and circle one number that best describes your answer.

1) Was this thing caused by someone (or something) else or was it caused by something you did?
   
   1. someone(thing) else
   2. myself & someone(thing) else
   3. caused by what I did

2) Do you think the cause of what happened to you will ever happen again, or did it just happen this once?
   
   1. will never happen again
   2. may happen again
   3. will definitely happen again

3) Does the cause of what happened just influence this one thing, or will it also influence other things in your life?
   
   1. influences only this one thing
   2. influences some situations, but not all
   3. influences all things in my life

4) How significant was this thing that happened to you?
   
   1. not at all significant
   2. somewhat significant
   3. very significant
Appendix H

Negative Affect Self-Statement Questionnaire (NASSQ)
NASSQ: 11-15

Name: ___________________________ Date of Birth: ___________________________

Sex:  M  F  Grade: ___________________________

Thoughts About Myself and Others

On the other side of this page are some thoughts that can "pop" into children's and adolescent's heads. Mark how often, if at all, you have had the following thoughts in the PAST WEEK. Please read each item carefully and circle the number on the answer sheet that matches how often you had the thought.

1 = not at all
2 = sometimes
3 = fairly often
4 = often
5 = all the time

Ronan, Kendall, & Rowe
THOUGHTS ABOUT MYSELF AND OTHERS: 11-15

Below are thoughts that can "pop" into children's heads. Mark how often, if at all, you have had the following thoughts in the **past week**. Please read each item carefully and circle the number on the answer sheet that matches how often you had the thought.

1 = not at all  
2 = sometimes  
3 = fairly often  
4 = often  
5 = all the time

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I usually mess things up.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>I usually do something stupid.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3.</td>
<td>I thought I was going to do something wrong.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>I am a winner.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>I feel frightened.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>I felt like crying.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7.</td>
<td>I was shaking.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8.</td>
<td>Life is terrible.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9.</td>
<td>I feel like everybody was looking at me and laughing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10.</td>
<td>I am very nervous.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11.</td>
<td>I felt weak like I was going to faint.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12.</td>
<td>Nobody cares anymore.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13.</td>
<td>I get scared.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14.</td>
<td>Other kids are making fun of me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15.</td>
<td>I feel like my heart is in my throat.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Mark how often, if at all, you have had the following thoughts in the PAST WEEK

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>I am not happy at all.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17</td>
<td>I am going to make a fool of myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18</td>
<td>I don't feel like doing anything and just want to be alone.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19</td>
<td>I wish I could do things right.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20</td>
<td>I want to stay in my room forever.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21</td>
<td>I feel like screaming.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22</td>
<td>Why do these things happen to me?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23</td>
<td>I get confused.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24</td>
<td>I feel so good.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25</td>
<td>Just my luck--it went wrong.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26</td>
<td>I think about somebody dying.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27</td>
<td>I get nervous feeling like something is going to happen.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28</td>
<td>I feel good about myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29</td>
<td>I thought my world was coming to an end.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30</td>
<td>I feel great about life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>31</td>
<td>I feel like I am being picked on for everything I do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>32</td>
<td>I think I am depressed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>33</td>
<td>I feel like something was dying inside me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Mark how often, if at all, you have had the following thoughts in the PAST WEEK:

<table>
<thead>
<tr>
<th>Thought</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>34. I feel like running away.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. I am very upset.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>36. I cry so much I can't stop.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37. What's wrong with me?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38. I can't stand this anymore.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39. I was afraid I would make a fool of myself.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Anxiety Items = 1, 2, 3, 5, 6, 7, 9, 10, 11, 13, 14, 15, 17, 18, 19, 21, 22, 23, 25, 26, 27
Depression Items = 4, 8, 12, 16, 20, 24, 28, 29
Negative Affectivity Items = 30, 31, 32, 33, 34, 35, 36, 37, 38, 39

Ronan, Kendall, & Rowe
CURRICULUM VITAE

Devin Alfred Byrd
640 Lee street
Blacksburg, Va. 24060
540-951-9781
debyrdd@vt.edu

Education:

Virginia Polytechnic Institute and State University, Blacksburg, Virginia
Dates in Attendance: August, 1994 - present
Degree expected: Master of Science, Doctor of Philosophy
Date expected: December, 1996; May 2000
Program: Clinical Psychology, Clinical-Child/Adolescent Psychology specialization
Awards: Graduate assistantship/ Tuition waiver

University of North Carolina at Chapel Hill, Chapel Hill, North Carolina
Dates in Attendance: August, 1990 - May, 1994
Degree: Bachelor of Science, May, 1994
Major: Psychology
Awards and Honors: John Motley Morehead Scholarship Finalist

Relevant Experience:

Department of Psychology, Virginia Polytechnic Institute and State University, Blacksburg, VA:
Graduate Student

August, 1994 - present
Supervisor: Thomas H. Ollendick, Ph.D.

Research Experience
Child: Conducted assessment study of childhood and adolescent anxiety and depression examining cognitions and attributional style using self-reports. Currently involved in a research project examining the psychological effects on victims of residential fire. Presently involved in the analysis and write up of a study investigating anxiety and depression using the tripartite model. Currently participating on an assessment clinic team for adolescents and children.

August, 1994 - present
Supervisors: Thomas H. Ollendick, Ph.D., Kerri Augusto, Ph.D., Russell T. Jones, Ph.D., George Clum, Ph.D.

Clinical Experience
Adult: Attending weekly supervision meetings and conducting therapy as part of clinical training. Presenting problems of clients include anxiety, depression, dissociative disorder, migraine headaches, marital difficulties, parenting difficulties, and referrals for court mandated therapy, personality and intellectual assessments. Special assignments include: serving as a co-therapist for a social anxiety treatment group.
Child: Attending weekly supervision meetings and conducting therapy as part of clinical training. Presenting problems of clients include anxiety, depression, social skills deficits, conduct disorder, oppositional defiant disorder, adjustment disorder, attention-deficit/hyperactivity disorder, encopresis, parent-child relationship difficulties, and referrals for intellectual assessments.

National Institute of Mental Health (NIMH) Residential Fire Project: Department of Psychology, Virginia Polytechnic Institute and State University, Blacksburg, VA; Graduate Research Assistant / Director of Training

August, 1996 - Present
Project Directors: Russell T. Jones, Ph.D.
Thomas H. Ollendick, Ph.D.

Job description and duties:
Responsibilities include management of instrument training for research interviewers, attending numerous weekly meetings, conducting research interviews with children/adolescents and adults, ongoing development of instruments (i.e., computerized and paper) and interview protocol, coordination of fire-tracking process, management of inter- and intrarater reliability, data aggregation and additional weekly assigned tasks. The four year, two-site (i.e. Blacksburg and Richmond) NIMH grant is designed to examine the immediate and long term psychological effects on victims of residential fires from diverse racial, cultural, SES, and geographic regions of Virginia.

Department of Psychology, Virginia Polytechnic Institute and State University, Blacksburg, VA; Summer Therapist

May, 1996 - August, 1996
Supervisor: Richard Eisler, Ph.D.

Job description and duties:
Responsibilities include attending two weekly supervision meetings, in addition to conducting family and individual therapy for adults, adolescents, and children. Presenting problems of clients include anxiety, depression, conduct disorder, oppositional defiant disorder, family adjustment disorder, parenting difficulties, dissociative identity disorder, bereavement, and marital difficulties.

Child Study Center Assessment Clinic Team: Department of Psychology, Virginia Polytechnic Institute and State University, Blacksburg, VA; Graduate Examiner

August, 1994 - May, 1995
May, 1996 - Present
Supervisor: Thomas H. Ollendick, Ph.D.

Child/Adolescent:
Attending weekly supervision meetings and conducting clinical assessment sessions with child/adolescent and parent outpatients. Presenting problems of child/adolescent clients include attention-deficit/hyperactivity disorder, anxiety, depression, learning disabilities, conduct disorder, oppositional defiant disorder, and adjustment disorders.
Journal of Clinical Child Psychology: Virginia Polytechnic Institute and State University, Blacksburg, VA:
Guest Student Editor

December, 1995
Editor: Thomas H. Ollendick, Ph.D.

Description:
Served as a guest student editor for an article review. Responsibilities included reviewing a manuscript describing a newly devised assessment instrument for Attention Deficit Hyperactivity Disordered adolescents and providing feedback for the authors.

Natural Hazards Research Grant: The differential effects of social support and loss on African-American families following a flood; Department of Psychology, Virginia Polytechnic Institute and State University, Blacksburg, VA

September 1994 - May, 1995
Supervisor: Russell T. Jones, Ph.D.

Submitted and approved for a grant designed to determine the differential psychological effects on African-Americans and their family systems relative to other cultural groups following a natural disaster (i.e., flood). Specifically, the study was developed to investigate: 1) the effect of ethnic group orientation and socioeconomic status on psychological functioning following a natural disaster, 2) the degree to which the perception of loss impacts the level of adaptive functioning subsequent to a natural disaster, and 3) the significant mediating factors that affect the level of family functioning in response to a natural disaster.

Department of Psychology, University of North Carolina at Chapel Hill, Chapel Hill, NC:
Research Assistant

September 1993-May 1994
Supervisor: Linda Craighead, Ph.D.

Research Experience
Assisted in a study examining the comorbidity of depression and anxiety in a non-clinical sample of students by using the Hopelessness Theory of Depression (Abramson, Metalsky, & Alloy, 1989). Depressed-only and anxious-only subjects were examined for unique attributional style patterns which typically serve as specific diatheses for depression or anxiety. Responsibilities include assisting in the administration and scoring of measures, debriefing of subjects, data collection and reduction.

Computer Experience
Responsible for aiding in the design and modification of a computer program used to help analyze content analysis data. The Content Analysis of Verbatim Explanations (CAVE; Peterson & Seligman, 1984) technique is an additional method utilized for measuring attributional style.

Department of Psychology, University of North Carolina at Chapel Hill, Chapel Hill, NC:
Research Assistant

July 1993-December 1993
Supervisor: Thomas Wallsten, Ph.D.
Research Experience
Assisted in the design of a study developed to examine college students' decision making processes and preference choices according to product dimensions (i.e., product importance, dimension importance, missing dimension estimation). Responsible for creating and developing product preference lists and their dimensional values in addition to assisting in the administration of the research protocol and debriefing of subjects.

Computer experience
Responsible for entering product preference lists and debugging specific segments of the computer program designed to administer the research protocol.

North Carolina Murdoch Center, Butner, NC: Volunteer

September 1993 - January 1994
Supervisors: Doug Irvin-Staff Psychologist II/ Licensed Psychological Associate
Rod Realon- Licensed Psychological Associate

Job description and duties:
Responsibilities include conducting structural analyses, observing and performing preference assessments, and participating in regular interdisciplinary meetings in reference to client management. Additional responsibilities include the development of a stimulus material classification system for approximately 40 clients, evaluation of the classification system's effectiveness, and filing inventory of stimulus materials (i.e., battery operated, mechanical, and tactile) using a computer database system. The center is home for over 300, severe to profound mentally retarded clients.

Legislator's School For Youth Leadership Development, Western Carolina University, Cullowhee, NC: Residence Life Counselor

June 1991-August 1991
June 1992-August 1992
Supervisor: Lashene Lowe, M.A.

Job description and duties:
Responsibilities include serving as a live-in residence counselor for 20 delegates in a dorm setting, development and coordination of daily activities, facilitation of weekly workshops, and serving as a trip leader for delegates during trips to neighboring cities and counties (approx. 150 delegates). The school consists of two separate summer sessions for Junior High and High School kids. The program is devised to help children and adolescents (from western North Carolina) increase their leadership skills, public speaking skills, self-esteem, school involvement, and community sensitivity.

Anytown, diversity camp, Boone, NC: sponsored by the National Conference of Christians and Jews (NCCJ): Counselor

July 1990
July 1991

Job description and duties:
Responsibilities include serving as a live-in counselor (with 24-hour availability for personal problem counseling) for 14 delegates, planning and coordinating daily activities (i.e., sing-a-
longs, campfires, workshops), and facilitating discussion groups. The camp is designed for approximately 70 high school delegates of differing religious beliefs, racial, cultural, SES, and ethnic backgrounds. The goal of the camp is to challenge societal stereotypes through daily and nightly exercises with the intent to promote exposure to and increased understanding amongst individuals from diverse backgrounds.

**Lion's Camp For Blind and Visually Impaired Children and Adolescents, Trooper Island, Kentucky:**
Counselor

August 1990

Job description and duties:
Responsibilities include serving as a 24-hour live-in counselor, assisting delegates with daily needs and meals, coordinating daily and evening activities (canoeing, swimming, paddle boating, archery, talent show), and assisting delegates around the island (i.e., hand and voice coaching). The camp serves as a summer "retreat" for blind and visually impaired children and adolescents from various areas of Kentucky.

**Additional Work Experience:**

**Student Transition Program: Virginia Polytechnic Institute and State University, Blacksburg, VA:**
Student Transition Program Summer Coordinator

May, 1996 - August, 1996
Supervisor: Delores Scott, Ed.D

Job description and duties:
Attended numerous staff meetings and one-on-one academic progress meetings with students. Responsibilities include coordinating, planning and implementing weekly activities, facilitating weekly seminars, and monitoring the weekly academic progress of students. The program is designed to introduce incoming African-American freshmen students (approx. 30) to college courses, dorm-living, and additional aspects of college life.

**Office of Academic Enrichment Programs: Project Success, Virginia Polytechnic Institute and State University, Blacksburg, VA:**
Co-Facilitator

January, 1996 - May, 1996
August, 1996 - December, 1996

Served as a co-facilitator for the Project Success program for two groups of approximately 5-7 individuals during the Spring and Fall semesters. The program, which meets weekly, is designed to create a supportive environment for undergraduate students in which they learn more productive study techniques, learn how to problem solve, and exchange ideas concerning their own academic experiences.

**Office of Academic Enrichment Programs: Virginia Polytechnic Institute and State University, Blacksburg, VA:**
Graduate Assistant

September, 1995 - May, 1996
Supervisor: Delores Scott, Ed.D
Job description and duties:
Responsibilities include planning, coordinating, and facilitating student focus groups, data analysis, write-up of results, and the development of a questionnaire designed to measure student attitudes and experiences with faculty at Virginia Tech. Other responsibilities include researching academic enrichment programs of numerous universities across the nation, in addition to planning and coordinating site visits with academic program directors.

Office of Academic Enrichment Programs, Virginia Tech Academic Success Program, Virginia Polytechnic Institute and State University, Blacksburg, VA: Advisor

September, 1995 - May, 1996
Supervisor: Delores Scott, Ed.D.

Job description and duties:
Responsibilities include monitoring the academic progress of approximately 35 African American psychology majors, scheduling and conducting individual meetings, maintaining progress notes for each student, serving as an advisor for degree requirements, and providing information concerning research opportunities, and graduate schools.

Community Work:

The George Shinn Uptown Shelter for Homeless Men, Charlotte, NC: Staff Supervisor

June, 1995 - November, 1995
Supervisor: Bill Newnan, M.A.

Job description and duties
Responsibilities include serving as a weekend staff supervisor for residents and volunteer personnel, conducting interviews with newly admitted residents, providing referrals for psychiatric and detoxification facilities, and supervising residents during shelter duties and meals. The shelter serves as an emergency, short and long term facility for homeless men.

Meals on Wheels lunch program, Radford Hospital, Radford, VA

May, 1995 - September 1995

Served as a volunteer for Radford Hospital by delivering hot meals to extended care patients in the community. The program primarily serves the elderly population and provides daily meals (i.e., lunch) to over 50 individuals in the surrounding areas.

Computer Experience:

PC-SPSS, SAS, Powerpoint, Wordprocessing (Microsoft Word, Wordperfect), Spreadsheet

Macintosh: Minitab statistical software, Think Pascal programming, Authorware programming, Wordprocessing (Microsoft Word, ClarisWorks), Spreadsheet (Excel, ClarisWorks), Database, Powerpoint
Professional Affiliations:

American Psychological Association (APA), student affiliate
Association for the Advancement of Behavior Therapy (AABT), student member

Conference Papers and Presentations:


Research in progress:

Byrd, D. A., & Ollendick, T. H. Anxiety and Depression in Children and Adolescents: An examination of cognition and attributional style


References:

Thomas H. Ollendick, Ph.D. Department of Psychology, Virginia Polytechnic Institute and State University, Blacksburg, VA 24060, (540) 231-6451

Russell T. Jones, Ph.D. Department of Psychology, Virginia Polytechnic Institute and State University, Blacksburg, VA 24060, (540) 231-5934

Devin A. Byrd