

THE RELATIONSHIP OF DEPRESSIVE SYMPTOMATOLOGY  
AND ACADEMIC ACHIEVEMENT MOTIVATION  
IN THE SCHOOL TO THE SOCIAL RESPONSES  
OF TEACHERS

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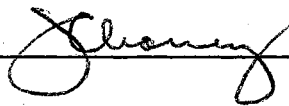
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## CHAPTER I

### INTRODUCTION

Until quite recently, major depressive disorders in children were thought to be quite rare. However, recent research indicates that the rate of these disorders is much higher at younger ages than previously recognized (e.g., Campbell, 1998; Harrington, 1993). Depression in young people tends to be associated with impairment of psychological functioning and the available data suggest that the recurrent risk is high with a strong continuity into adulthood (e.g., Campbell, 1998; Harrington, 1993). Further, several recent studies have reported a strong association between depressive disorder and suicide in this age group (e.g., Campbell, 1998).

As a result of this, depression in childhood is just now being recognized as a major psychological burden affecting many of today's youth, and researchers are beginning to address this disorder in children, particularly etiological factors and treatment considerations. Although these studies have greatly increased our understanding of child depression, they have primarily focused on neurobiological and cognitive factors of depression, without fully taking into account other factors, namely interpersonal factors. Regardless of what other factors may be involved in child depression, the interpersonal context of depression affects greatly whether a person becomes depressed, the person's subjective experience while depressed, and the

behavioral manifestations and resolution of the disorder (e.g., Joiner & Coyne, 1999). Consideration of the interpersonal context of depression is necessary for an adequate account of the disorder, and a failure to take into account these interpersonal intricacies leaves significant aspects of depression unexplained. Therefore, the focus of this study was to examine the interpersonal aspects of childhood depression. Specifically, the study attempted to discern these types of behaviors characteristic of depressed children that may serve to maintain depressive symptomatology in the context of interpersonal functioning in the school environment.

Attempting to understand the context of interpersonal functioning in depression is even more important when it is considered that until the last decade, many theorists questioned its existence in children who had not yet reached puberty (Kaslow & Rehm, 1985). Historically, commonly held conceptualizations included: (a) if depression exists in children, it is rare or occurs in “masked” form; (b) depression in youth is a transitory developmental phenomenon; and (c) childhood depression reflects a normal developmental stage (Kaslow & Rehm, 1985). Currently, the generally held consensus is that child depression parallels adult depression in that both disorders present with similar affective, cognitive, motivational, and vegetative symptoms, although there may be age-specific features (Schwartz, Gladstone, & Kaslow, 1998).

The assumption that childhood depression is similar to adult depression is evident in the Diagnostic and Statistical Manual-IV (DSM-IV); (APA, 1994). Depression is not listed among the disorders that are usually evident in infancy, childhood, or adolescence. Rather, affective disorders in children are classified under the section on adult affective

disorders (Cantwell, 1982). Even still, the DSM-IV does comment on marked differences that occur between children and adults. Certain symptoms such as somatic complaints, irritability, and social withdrawal are particularly common in children, whereas psychomotor retardation, hypersomnia, and delusions are less common in pre-puberty than in adolescence (APA, 1994). In pre-pubertal children, depression may occur more frequently in conjunction with other mental disorders (especially Disruptive Behavior Disorders, Anxiety Disorders, and Attention-Deficit Disorders) than in isolation. In adolescents, depression is frequently associated with Disruptive Behavior Disorders, Attention-Deficit Disorders, Anxiety Disorders, Substance-Related Disorders, and Eating Disorders (APA, 1994).

Given the problems with past definitions of childhood depression, the use of unreliable assessment methods, and variability of populations sampled, there are no definitive studies of incidence/prevalence of depressive phenomenon in children (e.g., Achenbach & Edelbrock, 1981; Brumbach, Jackoway, & Weinberg, 1980; Clarizio, 1994; Schwartz et al., 1998). However, extant studies indicate that 2%-5% of children in the general population satisfy DSM-IV criteria for depressive disorder and 10%-50% of children in clinical populations meet these criteria (Schwartz et al., 1998).

Despite the controversy surrounding childhood depression (i.e., definition, prevalence), much advancement has been made in understanding the etiology and maintenance of depressive disorders in childhood. Both neurobiological and psychological correlates of depression have been identified. These correlates include genetic factors (e.g., Downey & Coyne, 1990), neurobiological markers (e.g., Emslie,

Weinberg, Kennard, & Kowatch, 1994), family and peer functioning (e.g., Kaslow, Deering, & Racusin, 1994), and cognitive processes (e.g., Garber & Hilsman, 1992). Research on these correlates has led to the development of a number of etiological models of mood disorders in youth. This research has also advanced our understanding of maintenance factors in depression. Although several biological vulnerabilities have been identified for childhood depression, the current study only addressed the psychological aspects of depression maintenance.

As mentioned earlier, a number of conceptualizations of depression in adults have been used to provide a framework for understanding childhood depression. As a result, the vast majority of empirical work on childhood depression has been based on adult theories, the bulk of which has centered on cognitive and interpersonal theories of depression (Campbell, 1998; Clarizio, 1994; Schwartz et al., 1998). Widespread attention has focused on adult cognitive models of depression as they pertain to children. These models include Beck's cognitive theory (1967), the cognitive reformulation of learned helplessness theory (Abramson, Seligman, & Teasdale, 1978), and the self-control model (Rehm, 1977). Despite their unique characteristics, each of these cognitive models focuses on the interplay between cognitive styles and stressful life events as predisposing factors for depression.

In addition to cognitive theories, interpersonal theories of depression have also been used to facilitate a better understanding of childhood depression. Two theories of depression that subscribe to an interpersonal emphasis are Lewinsohn's (1974) social skill deficit theory and Coyne's (1976) interactional theory of depression. According to

interpersonal theories, depressed individuals and people in their environment engage in a cycle of depressive symptoms and reactions (Coyne, 1976).

In general, Lewinsohn's theory of depression emphasizes that the low rate of behavior output and the feelings of sadness or unhappiness associated with depression are due to a low rate of positive reinforcement (Lewinsohn, 1974). According to this perspective, a major cause of the low rate of positive reinforcement is an actual deficiency in social skills (Lewinsohn & Hoberman, 1982). Coyne's interactional theory of depression postulates that depressed people elicit rejection from other people in their environment (Coyne, 1976). Even though these two theories emphasize interactions between the depressed person and people in their environment, Lewinsohn's social skill deficit theory of depression is primarily one of etiology, while Coyne's interactional theory of depression is largely one of maintenance.

Although contemporary conceptualizations of childhood depression have examined both cognitive and interpersonal theories of depression, a growing body of research has focused on Coyne's (1976) interactional theory of depression. Coyne (1976) explained the maintenance of depressive patterns of behavior by examining the interpersonal consequences of emitting such behaviors. He contrasted his model with popular cognitive theories of depression (e.g., Abramson et al., 1978; Beck, 1967) which emphasized "cognitive distortions" made by depressed individuals, noting that perhaps depressed individuals accurately see the world in a negative manner (Coyne, 1976).

Specifically, Coyne (1976) postulated that most often when individuals first behave in a dysphoric manner (i.e., sadness, depression), others respond with concern and

helpful intent. Attempts are made to cheer the dysphoric individual and possibly reduce negative affect with distractions (Marcus & Nardone, 1992). However, if the depressive symptomatology continues, others begin to harbor feelings of anger, resentment, and hostility because they are unable to understand why the symptoms persist. At the same time, they do not express their annoyance because it is culturally inappropriate to criticize a person who is suffering. Instead, they give verbal reassurances while simultaneously emitting negative nonverbal cues (Coyne, 1976; Marcus & Nardone, 1992). The resultant discrepancy between the verbal content and affect quality presents a dilemma for the depressed individual. The depressed person's problem then, is to determine whether others are assuring him that he is worthy because they actually maintain this attitude toward him, or only because he has attempted to elicit such responses (Coyne, 1976). Rather than endure the time necessary to answer this question, the depressed person escalates his symptoms in order to seek repeated feedback in his testing of the nature of his acceptance and the genuineness of his relationships (Coyne, 1976). Thus, a cycle forms that serves to maintain the depressive symptomatology.

According to Coyne (1976), depressed individuals induce a negative mood in their interactional partners, which in turn, leads these partners to behave in a hostile, rejecting manner toward them. Several studies to test Coyne's interactional model experimentally have demonstrated the hypothesized mood induction effect (Coyne, 1976; Strack & Coyne, 1983). In addition, the rejection of depressed persons by their interactional partners has also been supported by research (e.g., Amstutz & Kaplan, 1987; Gotlib & Beatty, 1985; Gurtman, 1987). Further, this effect has been found to be

moderated by sex of the patient (e.g., Hammen & Peters, 1977; Joiner, Alfano, & Metalsky, 1992), length of acquaintance with the depressed person (e.g., Sacco, Milano, & Dunn, 1985; Segrin, 1993a), length of depressive episode (e.g., Sacco, Milano, & Dunn, 1988), and physical attractiveness of the target (e.g., Amstutz & Kaplan, 1987).

In addition to adult depression, several studies have investigated Coyne's theory in relation to childhood depression. Peterson, Mullins, and Ridley-Johnson (1985) used this theory to investigate children's responses to a hypothetical peer's childhood depression. Overall, results of the study indicated that children rated the depressed peers as less likable and attractive, and as engaging in fewer positive current and future behaviors. Subjects also perceived the depressed peers to need therapy more than the non-depressed peers.

Mullins, Peterson, Wonderlich, and Reaven (1986) also examined the influence of depressive symptomatology in children on the social responses and perceptions of adults. Adult subjects were asked to view one of four films in which a child was either depressed or non-depressed, and who had experienced numerous recent life stresses or no recent life stress. Subjects rated their level of depression, anxiety, and hostility before and after viewing the film. Results indicated that after exposure to a depressed child, subjects felt more anxious and depressed themselves. These subjects also indicated that they would not want further contact with such a child. Further, the adult subjects perceived the depressed child as unattractive and as likely to function ineffectively in a variety of social roles (Mullins et al., 1986).

The aforementioned researchers examined short-term interactions between strangers and depressed children using an analogue design (i.e., research that evaluates treatment under conditions that only approximate the clinical situation). Researchers have also examined the impact of long-term interactions between children and significant others (i.e., parents, teachers) in their social world. For example, Mullins et al. (1995) examined the relationship between self-reported and parent-reported depressive symptomatology in school children and the social responses of teachers. Significant relationships were found between self-reported child depressive symptoms and negative social responses. Significant relationships were also found between parents' ratings of delinquency and thought problems and teachers' social responses. Notably, no significant relationship was found between teacher social response ratings and parent reports of child depressive-type symptoms. Overall, partial support was found for Coyne's interactional theory of depression as applied to children (Mullins, Chard, Hartman, Bowlby, Rich, & Burke, 1995).

In a replication of the above study, Pace, Mullins, Beesley, Hill, and Carson (1999) examined the relationship between children's behavioral problems and teachers' social responding. Teachers rated children on measures of interpersonal attractiveness and personal rejection. Results indicated that the teachers' ratings of students' interpersonal attractiveness were significantly correlated with the level of student depression, internalizing problems, externalizing problems, and overall psychopathology. Such findings again lend partial support to Coyne's theory of depression in child populations.



Whereas Coyne has theorized in general terms about the negative social interactions between depressed individuals and their interactional partners, Swann (1983) has offered a complementary theory. In brief, the central tenet of the self-verification theory states that people are motivated to confirm their firmly held self-views out of a desire to bolster their perceptions of prediction and control (Swann, 1983). Of particular importance is the fact that these conclusions hold whether one is discussing positive or negative self-views. Therefore, people with high self-esteem will prefer favorable feedback and interaction with partners who provide positive appraisals while depressed individuals and people with low self-esteem will tend to solicit unfavorable appraisals and will be drawn to others who provide such feedback (Swann & Pelham, 1998).

Swann, Stein-Seroussi, and Geisler (1992) conducted a three-part study to investigate the applicability of this theory to depressed populations. Results of the study suggested that people exhibiting mild levels of depression prefer to interact with others who see them as they see themselves and gravitate toward partners who provide confirming appraisals. These findings were also observed in a study that examined self-verification theory in a child/adolescent population (Joiner, Katz, & Lew, 1997). Consistent with prior research, the results indicated that level of depressive symptoms was significantly associated with interest in negative feedback. Level of depression was also predictive of peer rejection and was more highly related to cognitive rather than emotional aspects of depression.

Collectively, the aforementioned research studies have demonstrated that adults characteristically reject depressed children and adolescents and that this rejection fosters a

depressogenic environment that serves to enforce negative self-views. However, a number of questions remain unanswered. Specifically, further research is warranted in order to understand what kind of child behaviors may be responsible for this rejection. To do this, future research must closely examine the various aspects of the depressed child's environment. Coyne himself (1990) suggested that an adequate model of depression could not be achieved without an understanding of the depressed person's "ecological niche, typical responses, and resulting feedback" (p. 188). Mullins, et al. (1995) and Pace, et al. (1999), alluded to this in their studies when they examined Coyne's theory within the child's academic "ecological niche" (school environment). However, their studies do not specify what child behaviors may actually elicit negative social responding and thus potentially maintain depressive symptomatology in the school environment.

The current study was designed to examine how specific behavioral patterns exhibited within the school environment may serve to elicit negative social responding and thereby maintain depressive symptomatology. Specifically, it was speculated that the construct of academic achievement motivation is a factor that influences the interactions between the depressed child and his or her teacher(s). Specifically, it was hypothesized that deficits in academic achievement motivation serve to elicit negative social responding from the child's teacher(s).

Academic achievement motivation is an important construct that is helpful in understanding a student's strivings and outcomes (Stinnett & Oehler-Stinnett, 1992). It is conceptualized as a component of the broader achievement motivation construct (Hughes,

Redfield, & Martray, 1989). Achievement motivation has been defined as the tendency to approach, accomplish, and master various tasks (Atkinson, 1964). Many theorists subscribe to this trait approach to motivation in that the desire for competence, or functioning effectively within the environment, emerges as a part of the developmental process (Deci, Vallerand, Pelletier, & Ryan, 1991).

Academic achievement motivation, a specific form of achievement motivation, refers to the tendency to strive to accomplish tasks in the academic arena (Stinnett & Oehler-Stinnett, 1992). Gottfried (1985) described academic achievement motivation as “enjoyment of school learning characterized by a mastery orientation, curiosity, persistence, task-endogeny, and the learning of challenging, difficult, and novel tasks”.

In addition to positive aspects of motivation, there are negative dimensions of academic achievement motivation. These dimensions include an external motivational style and/or a failure avoidant/amotivation style. An external style of motivation includes a preference for easier tasks, reliance on external feedback for regulation and determination of success or failure, and setting of performance goals (Dweck, 1986). An over-reliance on external approval may hamper intrinsic motivation such that when reinforcement is not forthcoming and the child faces repeated failure, a failure avoidant/amotivation pattern emerges (Covington, 1984). Children with this pattern give up easily, require external regulation, prefer easy tasks, and do as little work as possible.

Few studies have examined student and teacher perceptions of academic achievement motivation (Butler, 1994; Wentzel, 1997). In his research, Butler (1994) examined the ways in which teachers would respond to student failure attributed to low

ability (LA) or low effort (LE). Results indicated that the teachers would respond with pity and offer help to those in the LA group, while responding with anger towards the students in the LE group. Wentzel (1997) examined adolescents' perceptions of teacher caring in relation to their motivation to achieve positive academic outcomes in middle school. Results indicated that perceived caring from teachers predicted motivational outcomes, even when students' current level of psychological distress and beliefs about personal control were taken into account (Wentzel, 1997).

In sum, these studies suggest that motivational deficits (e.g., academic achievement motivation) are often attributed to within-child variables. Further, when lack of effort is perceived as a cause for achievement problems, it is seen in a more negative light than failure as a result of lack of ability. This negative perception may elicit negative social responses that are perceived by the child through the teacher's verbal feedback and behaviors. Such negative social responses may include overt rejection (i.e., negative evaluations), social avoidance of the depressed child, and expressed hostility. To better understand the effect of academic achievement motivation, as well as depressive symptomatology on social responding in the school environment, further research is warranted. Thus, the current study examined the following hypotheses:

1. Higher levels of children's depressive symptomatology will be associated with higher levels of negative social responding.
  - a. Higher levels of children's depressive symptomatology will be associated with lower levels of interpersonal attractiveness.

- b. Higher levels of children's depressive symptomatology will be associated with higher levels of interpersonal rejection.
2. Lower levels of academic achievement motivation will be associated with higher levels of negative social responding.
    - a. Lower levels of academic achievement motivation will be associated with lower levels of interpersonal attractiveness.
    - b. Lower levels of academic achievement motivation will be associated with higher levels of interpersonal rejection.
  3. The relationship between children's depressive symptomatology and negative social responding will be stronger at Time 2 than at Time 1.
  4. The relationship between academic achievement motivation and negative social responding will be stronger at Time 2 than at Time 1.

The remainder of this study is divided into four parts, including a comprehensive review of literature, methodology, results, and discussion. In the review section, the current research regarding childhood depression will be discussed. The section will also overview Coyne's interactional theory of depression and its application to childhood depression. The method section will review the methodology (i.e., participants, procedure), the results section will detail the analysis procedures utilized and subsequent findings, and the last chapter will discuss the findings.

## CHAPTER II

### REVIEW OF LITERATURE

#### Conceptualization of Childhood Depression

In a relatively brief period of time, childhood depression has gone from being essentially overlooked, to having its existence challenged and denied, to being a topic of serious study in child psychopathology (Clarizio, 1994). Case studies on child depression appeared early in the 20<sup>th</sup> century (e.g., de Saussure, 1947). These pioneering works examined the role of separation and attachment disorders on depressive symptomatology, but it was not until an article published in the journal The Nervous Child (Harms, 1952), did childhood depression receive much professional attention. The article, a special issue on manic-depressive illness, discussed whether depression occurred among pre-adolescent children (Clarizio, 1994).

Since the publication of Harm's (1952) paper, there has been considerable disagreement among theorists about childhood depression, from whether it occurs in pre-pubertal adolescents to discerning the associated features that define it (Clarizio, 1994). Commonly held conceptualizations about childhood depression included: (a) depression cannot exist in children; and (b) if depression exists in children, it is rare or occurs in "masked" form (Kaslow & Rehm, 1985). Currently, there is a general held consensus

that childhood depression parallels adult depression (Clarizio, 1994; Schwartz et al., 1998).

The belief that a clinical syndrome of depression did not exist in children was maintained by classical psychoanalysts (Garfinkel, 1986). These psychoanalytically oriented theorists held that depression in pre-pubertal adolescents could not occur because children lack a well-developed, internalized superego at their stage of development. Even though clinical observations contradicted this view, this notion continued to dominate psychodynamic perspectives on childhood mood disorders.

Another commonly held conceptualization, which was popular in the 1960s and 1970s, asserted that depression in children was masked or expressed in “depressive equivalents” (Glaser, 1968). The basic assumption was that children did not show the signs and symptoms of depression in the same manner as adults. Rather, depression in children was expressed through other behaviors and disturbances. “Depressive equivalents” were numerous, but those receiving the most attention included delinquent behavior, school avoidance or failure, and psychosomatic symptoms (Clarizio, 1994). Thus, even though the child did not present commonly seen overt symptoms such as depressed mood, he or she could have been diagnosed as depressed on the basis of “depressive equivalents” (Clarizio, 1994).

The third, and most current, conceptualization in this field, specified operational diagnostic criteria for depression in children that resembled the criteria used to diagnose depression in adults (Clarizio, 1994; Harrington, 1993). This conceptualization stemmed

from the idea that depression in children had many similarities with depression arising in adults, as well as a number of features seen only in childhood (Harrington, 1993).

The assumption that childhood depression is similar to adult depression is evident in the Diagnostic and Statistical Manual for Mental Disorders-IV (APA, 1994). Notably, depression is not listed among the disorders that are usually evident in infancy, childhood, or adolescence. Rather, affective disorders in children are classified under the section on adult mood disorders (Cantwell, 1982). Even still, the DSM-IV does comment on age-specific associated features that differ across developmental periods. For instance, irritable mood may substitute for depressed mood in both children and adolescents (APA, 1994). In pre-pubertal children with major depression, somatic complaints, irritability, and social withdrawal are thought to be particularly common. At this age, depression is also thought to occur more frequently in conjunction with other mental disorders (especially Disruptive Behavior Disorders, Anxiety Disorders, and Attention-Deficit Hyperactivity Disorder); (Schwartz et al., 1998). In adolescence, restlessness, aggression, and school difficulties are likely, as well as withdrawal from social activities and a reluctance to cooperate in family ventures (Schwartz et al., 1998). Depression at this age is more frequently associated with Disruptive Behavior Disorders, Attention-Deficit Hyperactivity Disorder, Anxiety Disorders, Substance-Related Disorders, and Eating Disorders (APA, 1994; Schwartz et al., 1998).

According to the DSM-IV (APA, 1994), depression as a clinical disorder can be diagnosed in children or adolescents when five or more symptoms have been met during the same two-week period and represent a change from previous functioning. These



symptoms include depressed mood or irritability, anhedonia (i.e., loss of pleasure or interest in previously enjoyable activities), significant weight change (i.e., loss or gain of 5% of body weight within a month) or failure to make expected weight gains, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue, feelings of worthlessness or inappropriate guilt, difficulties concentrating or making decisions, and recurrent thoughts of death. At least one of the symptoms must be depressed mood, irritability, or anhedonia. A child or adolescent meeting these criteria would be given the diagnosis of Major Depressive Episode.

Dysthymic disorder is diagnosed when a child or adolescent has experienced depressed mood or irritability more days than not for at least one year, and has experienced at least two of the following symptoms: poor appetite or overeating, insomnia or hypersomnia, fatigue, low self-esteem, poor concentration or difficulty making decisions, and feelings of hopelessness (APA, 1994). The term depressive symptoms is often used to indicate the presence of some or all of the symptoms associated with depression or dysthymia, without implying that the child or adolescent meets the diagnostic criteria for Major Depressive Disorder or Dysthymic Disorder (APA, 1994).

#### Incidence/Prevalence

Given the problems with past definitions of childhood depression, there are no definitive studies of incidence/prevalence of depressive phenomenon in children (e.g., Achenbach & Edelbrock, 1981; Brumbach et al., 1980; Clarizio, 1994; Schwartz et al.,

1998). However, recent research has attempted to address many of these methodological issues. Most of the epidemiological studies conducted recently have used standardized methods of data collection, and operationalized diagnostic criteria for depression (usually DSM-IV). Information has generally been collected from both parent and child, and some studies have also used teacher informants (e.g., Schwartz et al., 1998).

Traditionally, prevalence figures on childhood depression have been reported according to four distinct populations. These populations include childhood psychiatric populations, general childhood populations, school-based general education populations, and special education populations.

When assessing depression in a child psychiatric population, Brumbach et al. (1980) found that 62 of 100 consecutive referrals to an educational and diagnostic center manifested a clinical diagnosis of depression. Achenbach and Edelbrock (1981) reported that 43% of referred 4- to 5-year old boys and 86% of referred 12- to 13-year old girls were rated as depressed by their parents. Carlson and Cantwell (1980) interviewed 102 children and reported that 60% manifested depressed symptoms, 49% displayed evidence of depression on the Children's Depression Inventory (CDI), and 28% met DSM-III-R criteria for depressive disorders. Such work pointed out the importance of distinguishing between depression as a symptom, a syndrome, and a disorder.

However, Kashani, Lababidi, and Jones (1982) did not find a high prevalence rate of child depression. In their study, Kashani et al., reported only a 13% incidence rate of major depressive disorders in children admitted to an inpatient community health center. Similarly, Poznanski and Zrull (1970) found that only 14% of 1758 children referred to a

psychiatric clinic showed clear signs of depression. A possible reason for the different rates of depression observed in the aforementioned studies may be due to the differing criteria used to assess depression. The studies reporting higher rates of depression (e.g., Brumbach et al., 1980; Carlson & Cantwell, 1980) used one mode of assessment (e.g., self-report questionnaire or interview), whereas the studies that reported lower incidences of depression used several means to diagnose depression (e.g., Kashani et al., 1982; Poznanski & Zrull, 1970).

Studies based on the general child population have also shown considerable variability in prevalence rates. For instance, Kashani and Simmonds (1979) reported that only 1.9% of children aged 7 to 11 years of age displayed clear evidence of depression. In contrast, Albert and Beck (1975) reported that 33% of subjects aged 11 to 13 years of age showed evidence of depression based on Beck Depression Inventory (BDI) cutoff scores.

Data gathered on school-based general education students through peer nomination of elementary students suggested that 5.2% of these children manifested symptoms of depression (Cooper, 1983). Studies of high school students have typically yielded higher prevalence rates. For instance, an epidemiological study of urban and suburban high school students found that roughly 1 in every 6 (18%) adolescent was either moderately or severely depressed (Reynolds, 1985). In a study of high school students, Kandell and Davies (1982) found that 35% of the adolescents were categorized as highly depressed. The high incidence of depression reported in this sample is likely due to the fact that the study did not assess for the clinical syndrome of depression.

Rather, the study measured depressive symptoms using a self-report measure of depressive mood.

Studies of school-based special education students also document high rates of depression. For example, Maag and Behrins (1989), using self-report measures of depression, found that 21% of learning disabled and seriously emotionally disturbed adolescents were depressed. Further, research has suggested that behaviorally disordered students in self-contained special education classrooms are more depressed than those behaviorally disordered students who are mainstreamed (Allen-Meares, 1991).

In sum, it is difficult to reach any sound conclusions regarding the prevalence of depression among children and adolescents. The estimates vary according to (a) the definitional criteria used (i.e., DSM-IV, Public Law 94-142 criteria), (b) the population studied (i.e., general population versus clinic samples), (c) type of diagnostic method (i.e., self-report, interview), and (d) data source (i.e., parent, child).

### Theoretical Models

Despite the controversy surrounding childhood depression (i.e., definition, prevalence), much advancement has been made in understanding the etiology and maintenance of depressive disorders in childhood. Both neurobiological and psychological correlates of depression have been identified. These correlates include genetic factors (e.g., Downey & Coyne, 1990), neurobiological markers (e.g., Emslie et al., 1994), family and peer functioning (e.g., Kaslow et al., 1994), and cognitive processes (e.g., Garber & Hilsman, 1992). Research on these correlates has led to the development

of a number of etiological models of mood disorders in youth. This research has also advanced our understanding of maintenance factors in depression. Although several biological vulnerabilities for childhood depression have been identified, the current study will only address the psychological aspects of depression etiology and maintenance.

As mentioned earlier, a number of theoretical models of depression in adults have been used to provide a framework for understanding childhood depression. As a result, the vast majority of empirical work on childhood depression has been based on theories derived from adults, the bulk of which has centered on cognitive and interpersonal theories of depression (Campbell, 1998; Clarizio, 1994; Schwartz et al., 1998).

Widespread attention has focused on adult cognitive models of depression as they pertain to children. These models include Beck's cognitive theory (1967), the cognitive reformulation of learned helplessness theory (Abramson et al., 1978), and the self-control model (Rehm, 1977). Despite their unique characteristics, each of these cognitive models focuses on the interplay between cognitive styles or cognitive appraisal mechanisms and stressful life events as predisposing factors for depression.

Beck (1967) was one of the first to describe a unique cognitive style that hypothetically characterized depression in adults. The central tenet of Beck's theory is the negative cognitive triad. The cognitive triad consists of negative thoughts about oneself, the situation, and the future. A person who is depressed misinterprets facts in a negative way, focuses on the negative aspects of any situation, and also has pessimistic and hopeless expectations about the future (Beck, 1967). Beck's theory suggests that the

negative self-schema (diathesis) and the experience of a negative life event (stress) leads to cognitive distortions and subsequent depression (Beck, 1967).

Beck's model has been the source of considerable research from both theoretical and clinical perspectives. Research studies examining Beck's model have demonstrated that depressed youth have low self-esteem, rate themselves as less competent than others, feel hopeless, and report more negatively distorted cognitions on self-report measures (e.g., Hammen & Zupan, 1984; Prieto, Cole, & Tageson, 1992). There is, however, inconsistent support for the presence of more pronounced negative schemata in depressed children than in non-depressed children.

Contrary to Beck, Abramson et al. (1978) expanded on the learned helplessness theory to develop a theory of depression. According to the original learned helplessness model (Seligman, 1975), individuals become helpless and depressed when they perceive environmental events as uncontrollable. After several empirical investigations with humans, this model was revised and the attributional reformulation theory was proposed (Abramson et al., 1978).

According to the revised theory, the manner in which a person explains the causes of life events reflects the cognitive process by which learned helplessness is modulated. Individuals whose explanatory styles are characterized by internal, stable, and global attributions for negative events are hypothetically at a greater risk of developing depressive symptoms than are those who make external, unstable, and specific attributions for these same events (Abramson et al., 1978). More recently, the model has been revised further and presented as the hopelessness theory of depression (Abramson,

Metalsky, & Alloy, 1989). In this revision, attributional style (diathesis) serves as a moderator between negative life events perceived to be important (stress) and the development of hopelessness. Hopelessness, in turn, is thought to lead directly to the experience of depression (Abramson et al., 1989). Thus, depression is thought to result from a state of hopelessness engendered by the attribution of negative life events to internal, stable, and global factors (Abramson et al., 1989).

Current research largely supports the application of learned helplessness theory to youth. Regarding the original formulation, a series of studies indicate that depressive symptoms in youth are associated with “personal helplessness” (i.e., perceived competence) and “universal helplessness” [(i.e., perceived non-contingency)(Weisz, Sweeney, Proffit, & Carr, 1993)]. With respect to the attributional reformulation, the bulk of the research reveals, that, relative to their non-depressed counterparts, depressed youngsters evidence a more internal, stable, and global attributional pattern for negative events, and a more external, unstable, and specific attributional style for positive events (e.g., Garber & Hilsman, 1992; Gladstone & Kaslow, 1995; Nolen-Hoeksama, Girgus, & Seligman, 1986).

Lastly, Rehm (1977) postulated a self-control model of depression in which negative self evaluations, low rates of self-reinforcement, and high rates of self-punishment are seen as leading to behavior typical of depressed individuals. Building on Kanfer's (1971) concept of self-control, Rehm (1977) noted that individual's can have deficits in three processes: (a) self-monitoring, (b) self-evaluation, and (c) self-reinforcement. Kaslow and Rehm (1985) note two types of self-monitoring problems:

(a) attending to negative events while ignoring positive events, and (b) focusing on the immediate rather than the later consequences of behavior. Maladaptive self-monitoring is believed to result in a negative view of self, the world, and the future.

Kaslow and Rehm (1985) also noted two types of maladaptive difficulties in self-evaluation. These entailed: (a) setting unrealistic and stringent self-standards (high standards for positive self-evaluation and low standards for negative self-evaluation), and (b) inaccurate attributes of success or failure (Kaslow & Rehm, 1985). Lastly, deficits in the area of self-reinforcement were postulated to be evidenced in extreme self-punishment and inadequate self-reinforcement. A lack of self-reward is associated with low activity levels and a lack of initiative, whereas excessive self-punishment is thought to be reflected in self-critical comments and other forms of self-directed hostility (Clarizio, 1994; Kaslow & Rehm, 1985).

Research that has studied the applicability of Rehm's self-control theory indicates that depressed children evidence impaired self-monitoring, self-evaluation, and self-reinforcement (e.g., Kaslow, Rehm, Pollack, & Siegel, 1984; Kaslow, Rehm, & Siegel, 1988). Myer, Dyck, and Petrinack (1989) found that despite similar performance, depressed youth provided lower evaluations of their performance and punished themselves more than non-depressed youth (Myer et al., 1989). Finally, depressed children in a clinic population reported more overall self-control than did the non-depressed children in a clinic population (Kaslow et al., 1984).

Overall, relatively few studies have explored the cognitive characteristics of depressed children or adolescents, and the majority of these have utilized non-clinical



samples (Schwartz et al., 1998). The resultant findings with regard to the cognitive, learned helplessness, and self-control theories indicates that negative self-views, distorted cognitions, errors in self-evaluation and self-reinforcement, maladaptive attributional styles, and the presence of negative life events are all associated with depressive conditions in youth (e.g., Gladstone & Kaslow, 1995; Hammen & Zupan, 1984; Weisz et al., 1993; Prieto et al., 1992). Unfortunately, it is not yet clear if these cognitive styles are the result of depression, or, if they predispose an individual to depression. In either case, the diathesis-stress components of these theories have not been investigated adequately in children and adolescents and future longitudinal research is needed in this area (Schwartz et al., 1998).

In addition to cognitive theories, interpersonal theories of depression have also been used to better understand childhood depression. The two theories of depression that are primarily based on interpersonal aspects of behavior are Lewinsohn's (1974) social skill deficit theory and Coyne's (1976) interactional theory of depression. Even though these two theories emphasize interactions between the depressed person and people in their environment, Lewinsohn's social skill deficit theory of depression is primarily one of etiology, while Coyne's interactional theory of depression is more of a maintenance model.

In brief, Lewinsohn's theory of depression emphasizes that the low rate of behavior output and the feelings of sadness or unhappiness associated with depression are due to a low rate of positive reinforcement (Lewinsohn, 1974). According to this perspective, a major cause of the low rate of positive reinforcement is an actual

deficiency in social skills (Lewinsohn & Hoberman, 1982). Furthermore, depressed people are seen as less capable of reinforcing others, thereby decreasing their chances for social reciprocity. In addition, Lewinsohn's theory (1974) contends that the maintenance of depression, as well as its severity, is influenced by the depressed person's tendency to engage in few social activities and their relative inability to experience pleasure from activities (Lewinsohn, 1974).

Lewinsohn's (1974) theory has received support in both the adult and child literatures. With regard to child and adolescent populations, Wierzbicki and McCabe (1988) found that social skill deficits in children were related to their current level of depression and were predictive of future levels of depression. This suggests that depressed children lack the necessary skills for engaging in positive social interactions. On an interpersonal level, depressed children have shown social deficits when interacting with parents, siblings, and peers (e.g., Altman & Gotlib, 1988; Schwartz et al., 1998). Depressed children have also been found to be less satisfied with their performance and perceiving themselves as less socially competent than others (e.g., Altman & Gotlib, 1988; Clarizio, 1994).

Although research has supported Lewinsohn's theory, it has not been without criticism. First, many individuals experience a low rate of response-contingent positive reinforcement, but do not experience serious depressive disorders (Clarizio, 1994). Second, although many studies are consistent with the view that depressed adults are less socially skillful and that they receive less reinforcement through social interactions, the specific nature of the overt behavioral deficits remains to be clearly delineated. Further,

it is not known whether these deficits will differ in accordance with (a) gender; (b) developmental status; and (c) specific situation (Clarizio, 1994). Lastly, because the evidence for this theory rests on correlational data, it is not clear whether participation in pleasant events caused mood improvement or whether mood improvement caused increased participation in enjoyable activities (Clarizio, 1994).

In his interactional theory of depression, Coyne (1976) attempted to explain the maintenance of depressive patterns of behavior by focusing on the interpersonal consequences of emitting such behaviors. He contrasted his model with popular cognitive theories of depression (e.g., Abramson et al., 1978; Beck, 1967) which emphasized "cognitive distortions" made by depressed individuals. Coyne (1976) noted that perhaps depressed individuals see the world *accurately* (i.e., they indeed are being rejected or criticized by others).

More specifically, Coyne (1976) postulated that most often when individuals first behave in a dysphoric manner, others respond with concern and helpful intent. Attempts are made to cheer the dysphoric individual and possibly reduce negative affect with distractions (Marcus & Nardone, 1992). However, if the depressive symptomatology continues, others begin to harbor feelings of anger, resentment, and hostility because they are unable to understand why the symptoms persist. At the same time, they do not express their annoyance because it is culturally inappropriate to criticize a person who is suffering. Instead, they give verbal reassurances while simultaneously emitting negative nonverbal cues (Coyne, 1976; Marcus & Nardone, 1992).

The resultant discrepancy between the verbal content and affect quality thus presents a dilemma for the depressed individual. The depressed person's problem then, is to determine whether others are assuring him that he is worthy because they actually maintain this attitude toward him, or only because he has attempted to elicit such responses. Rather than endure the time necessary to answer this question, the depressed person escalates his symptoms in order to seek repeated feedback in his testing of the nature of his acceptance and the genuineness of his relationships (Coyne, 1976). Thus, cycle forms that serves to maintain the depressive symptomatology.

According to Coyne (1976), depressed individuals also induce a negative mood in their interactional partners, which in turn, leads these partners to behave in a hostile, rejecting manner toward them. In a classic study, Coyne (1976) demonstrated his proposed negative mood induction. In the study, Coyne arranged for non-depressed people to hold a conversation with a depressed patient, a non-depressed patient, or a control. After the conversation, the participants filled in questionnaires about their mood, their perceptions of the other people, and their desire to interact with the others again. Compared to people who spoke to non-depressed patients or to members of the control group, those who spoke to depressed patients described themselves as significantly more depressed, anxious, and hostile after the conversations. Those who spoke to members of the depressed group also had less desire to see or interact with them again than callers who spoke to members of either of the other groups.

Other studies testing Coyne's interpersonal theory of depression have generally provided supportive data regarding various aspects of his theory. These aspects include

the hypothesized mood induction effect (e.g., Strack & Coyne, 1983) and the rejection of depressed persons by their interactional partners (e.g., Amstutz & Kaplan, 1987; Gotlib & Beatty, 1985; Gurtman, 1987). Further, these effects have been found to be influenced by gender of the patient (e.g., Hammen & Peters, 1977; Joiner et al., 1992), length of acquaintance with the depressed person (e.g., Sacco et al., 1985; Segrin, 1993a), length of depressive episode (e.g., Sacco et al., 1988), and physical attractiveness of the target (e.g., Amstutz & Kaplan, 1987). Collectively, these studies demonstrate that depressed individuals engage other people in their environment(s) in ways that elicit depressing feedback and loss of support.

In addition to studies of adults, several studies have investigated Coyne's theory in relationship to childhood depression. Peterson et al. (1985) used this theory to investigate children's responses to a peer's hypothesized depression. Each subject was shown one of four films depicting a female peer who was either depressed or non-depressed, and who had experienced numerous recent life stresses or no recent life stress. Overall, the results indicated that children rated the depressed peers as less likable and attractive, and as engaging in fewer positive current and future behaviors. Subjects also perceived the depressed peers needed therapy more than the non-depressed peers (Peterson et al., 1985).

Mullins et al. (1986) also examined the influence of depressive symptomatology in children on the social responses and perceptions of adults. Adult subjects were asked to view one of four films in which a child was either depressed or non-depressed, and who had experienced numerous recent life stresses or no recent life stress. Subjects rated

their level of depression, anxiety, and hostility before and after viewing the film. Results indicated that after exposure to a depressed child, subjects felt more anxious and depressed themselves. These subjects also indicated that they would not want further contact with such a child. Further, the adult subjects perceived the depressed child as unattractive and as likely to function ineffectively in a variety of social roles.

Lastly, Conolly, Geller, Marton, and Kutcher (1992) examined peer responses to social interaction with depressed adolescents using “live” confederates. Twenty-three adolescents diagnosed with a depressive disorder and twenty-three matched normal adolescents participated in a semi-structured interaction with an unfamiliar peer who served as a confederate. Following the interaction, the peer confederates rated their response to their partner’s social acceptability. Results indicated that depressed subjects were less likely to be rated as popular in their peer group than non-depressed adolescents were. Further, female depressives were rated as less desirable friends and as less interested in establishing friendships than non-depressed females. Depressed boys were seen as less popular than the normal boys, but did not differ in their ratings of friendliness, likability, or ease in making friends. The finding that depressed girls were viewed negatively by their peers is consistent with the reports of other research indicating that depression in females is associated with negative social reactions. However, the finding that the depressed boys did not receive as many negative ratings as did the depressed girls, is not consistent with the results frequently reported in studies of adult reactions to depression. Therefore, findings from this study lend partial support to Coyne’s interactional theory of depression as it is applied to children and adolescents.

The aforementioned studies examined short-term interactions between strangers and depressed children in an analogue design. Research has also examined the impact of longer-term interactions between children and significant others (i.e., parents, teachers) in their social world. For example, Mullins et al. (1995) examined the relationship between self-reported and parent-reported depressive symptomatology in school children and the social responses of teachers. Significant relationships were found between self-reported child depressive symptoms and negative social responses. Significant relationships were also found between parents' ratings of delinquency and thought problems and teachers' social responses (Mullins et al., 1995). Notably, no significant relationship was found between teacher social response ratings and parent reports of child depressive-type symptoms. In addition to the primary analyses, an exploratory analysis was conducted six months later using a subsample of the original participants. The findings suggested that the relationship between self-reported depressive symptomatology and negative social responding may increase over time. Thus, only partial support was found for Coyne's interactional theory of depression as applied to children (Mullins et al., 1995).

In a replication of the above study, Pace et al. (1999) examined the relationship between children's behavioral problems and teachers' social responding. Again, teachers rated children on measures of interpersonal attractiveness and personal rejection. Results indicated that the teachers' ratings of students' interpersonal attractiveness were significantly correlated with the level of student depression, internalizing problems, externalizing problems, and overall psychopathology. Such findings again lend partial support to Coyne's theory of depression in child populations.

Sacco and Macleod (1990) examined the interpersonal processes of depression in a sample of sixty-one pregnant adolescents enrolled in a nonresidential alternative educational program. Each adolescent completed a depression measure and indicated their attitude toward their pregnancy and social support. In addition, the primary caregiver of each adolescent indicated his/her affective response and attitude toward the pregnancy. As predicted, adolescent depression was significantly related to a mixed pattern of caregiver reactions. Caregivers of relatively depressed adolescents reported (a) a pattern of affective reactions that reflected both anger and concern, and (b) a more negative attitude about the pregnancy. Interestingly, adolescent depression was unrelated to the degree of social support.

In a similar vein as the aforementioned studies, Bell-Dolan, Reaven, and Peterson (1993) examined the relationship between child depression and social functioning in an elementary school setting. Data was collected using a multiple reporting source method, including self-, peer, and teacher reports. Factor analysis of the data collected from these reports indicated six social-functioning factors that were used to predict depression. These factors were: (a) negative social behavior, (b) social withdrawal, (c) other-related social competence, (d) self-rated social competence, (e) social activity, and (f) accuracy of self-evaluated social competence. Results indicated that negative social behavior and social competence predicted depression reliably from all three sources. Social withdrawal predicted depression as reported by peers and teachers, and low social activity predicted self-rated depression. In addition, negative social behavior, social withdrawal,



and low other-related social competence predicted composite depression scores (combining data from multiple reporters).

Lastly, Rudolph, Hammen, and Burge (1994) examined interpersonal functioning and depressive symptoms in both home and school contexts. Information about interpersonal competence was gathered from several sources, including children, parents, teachers, and behavioral observations. Depressive symptoms were found to be significantly related to difficulties in multiple areas of competence. These areas included maladaptive social problem-solving styles, conflict-negotiation and affect regulation deficits, and peer rejection. Comparisons of the relative contributions made by depressive and anxiety symptoms to the prediction of functioning yielded some evidence of a specific relation between depressive symptoms and impairment. The findings of this study add to a growing database that suggests that depression in children may reflect very realistic interpersonal difficulties.

The aforementioned studies collectively lend support to Coyne's interpersonal theory of depression. Specifically, they add to the growing research on child depression suggesting that depressed children and adolescents interact with individuals in their environments in ways that elicit negative social responding. Although it was Coyne (1976) who first argued passionately for this interactional perspective, it was Swann (1983) who continued the argument by attempting to understand the particulars of interpersonal processes and depression.

Swann (1983) proposed the self-verification theory, with the central tenet being that people strive to attain and preserve predictable, certain, and familiar self-concepts.

Further, the theory suggests that people preserve self-concepts by seeking and actively soliciting self-confirming interpersonal responses from those in their social environments. Swann and colleagues note that people are motivated to seek (e.g., Swann et al., 1992), attend to (e.g., Swann & Read, 1981a), and believe self-verifying feedback (e.g., Swann, Griffin, Predmore, & Gaines, 1987).

A key and perhaps counterintuitive implication of the theory is that these conclusions hold whether one is studying positive or negative self-views. In essence, people with high self-esteem prefer favorable feedback and interaction partners who provide positive appraisals (Swann & Pelham, 1998). Conversely, depressed individuals and people with low self-esteem, tend to solicit unfavorable appraisals and are drawn to others who provide such feedback (Giesler, Josephs, & Swann, 1996; Joiner et al., 1997).

Self-verification theory further suggests that the desire for confirming feedback explains why depressed people seek negative feedback, eschew positive feedback, and interpret evaluative information in ways that confirm their relatively negative self-views (Joiner & Coyne, 1999). Swann et al. (1992) conducted a three-part study to investigate self-verification processes in people who were diagnosed with depression. Taken together, the results of the studies suggested that people exhibiting mild levels of depression prefer to interact with others who see them as they see themselves (i.e., negatively) and gravitate toward partners who provide confirming appraisals (Swann et al., 1992). Further, the findings suggest that the feedback-seeking activities of depressed people allowed them to modify their relationship partners' evaluations of them in such a way that their partners came to view them as negatively as they viewed themselves.

Moreover, the more negative the partners' appraisals became, the more inclined the partners were to abandon their relationship (Swann et al., 1992). Thus, self-verification strivings seem to compel depressed people to transform their interaction partners into people who are most apt to reject them (Joiner & Coyne, 1999).

These findings were also observed in a study examining Swann's self-verification theory in a child/adolescent population (Joiner et al., 1997). Participants completed self-report questionnaires on depression, self-esteem, anxiety, negative and positive affect, and interest in negative feedback from others. Results were supportive of aspects of the self-verification theory. Consistent with the prior research, the results indicated that level of depressive symptoms was significantly associated with interest in negative feedback. Level of depression was also predictive of peer rejection, was more highly related to cognitive than emotional aspects of depression, and was specifically associated with depression (rather than being generally associated with emotional distress); (Joiner et al., 1992).

#### Summary of Interpersonal Responding Literature

Collectively, these research studies demonstrate that adults characteristically reject depressed children in the context of social interaction. Further, research has indicated that this rejection and hostility in turn fosters a depressogenic environment serving to confirm the unfavorable self-views of depressed children and adolescents, thereby maintaining or exacerbating a depressive state. Still, a number of questions remain unanswered. Specifically, further research is warranted to understand what *type*

of child behaviors may be responsible for this rejection. Obviously, it is not only depressed behavior that elicits rejection, but a number of types of negative behaviors. To do this, future research must more closely examine various aspects of the depressed child's behavior. Coyne himself (1990) suggested that an adequate model of depression could not be achieved without an understanding of the depressed person's "ecological niche, typical responses, and resulting feedback" (p. 188). Mullins et al. (1995), Pace et al. (1999) and other researchers alluded to this issue in their studies when they examined Coyne's theory within the child's academic "ecological niche" (school environment). However, their studies do not adequately specify what specific child behaviors actually elicit negative social responding, and thus potentially maintain depressive symptomatology in the school environment.

The current study was designed to examine how specific behavioral patterns within the school environment serve to elicit negative social responding and maintain depressive symptomatology. Specifically, it was hypothesized that the construct of academic achievement motivation is a potential factor that influences the interactions between the depressed child and his teacher(s). It is hypothesized that deficits in academic achievement motivation serve to elicit negative social responding from the child's teacher(s). In the section to follow, the literature on academic achievement motivation will be briefly reviewed and a rationale provided for the current study.

## Academic Achievement Motivation

Academic achievement motivation is an important construct that is helpful in understanding a student's strivings and outcomes (Stinnett & Oehler-Stinnett, 1992). It is conceptualized as a component of the broader achievement motivation construct (Hughes et al., 1989). Achievement motivation in general has been defined as the tendency to approach, accomplish, and master various tasks (Atkinson, 1964). Many theorists subscribe to this trait approach to motivation in that the desire for competence, or functioning effectively within the environment, emerges as a part of the developmental process (Deci et al., 1991).

Although it is postulated that an innate need for achievement develops within an individual, achievement motivation is also a function of life experiences (e.g., previous successes and failures), biological factors (e.g., attention and self-regulatory capacity), environmental influences (e.g., family, teachers, peers), and immediate situational variables [(i.e., task difficulty)(Barkley, 1996; Cooper, 1983; Covington, 1984; Dweck, 1986).

Academic achievement motivation, a specific form of achievement motivation, refers to the tendency to strive to accomplish tasks in the academic arena (Stinnett & Oehler-Stinnett, 1992). Gottfried (1985) described academic achievement motivation as "enjoyment of school learning characterized by a mastery orientation, curiosity, persistence, task-endogeny, and the learning of challenging, difficult, and novel tasks."

In addition to positive aspects of motivation, there are negative dimensions of academic achievement motivation. These dimensions include an external motivational

style and/or a failure avoidant/amotivation style. An external style of motivation includes a preference for easier tasks, reliance on external feedback for regulation and determination of success or failure, and setting of performance goals (Dweck, 1986). An over reliance on external approval may hamper intrinsic motivation such that when reinforcement is not forthcoming and the child faces repeated failure, a failure avoidant/amotivation pattern emerges (Covington, 1984). Children with this pattern give up easily, require external regulation, prefer easy tasks, and do as little work as possible.

Few studies have examined student and teacher perceptions of academic achievement motivation. Wentzel (1997) examined adolescents' perceptions of teacher caring in relation to their motivation to achieve positive academic outcomes in middle school. A longitudinal sample of students was followed from sixth to eighth grades. Results indicated that perceived caring from teachers predicted motivational outcomes, even when students' current level of psychological distress and beliefs about personal control were taken into account. Teachers who were caring were described as (a) demonstrating democratic interaction styles, (b) developing expectations for student behavior in light of individual differences, (c) modeling a caring attitude toward their own work, and (d) providing constructive feedback (Wentzel, 1997).

Two studies examined the ways in which teachers respond to student failure attributed to low ability (LA) and low effort (LE) and how these responses are interpreted by primary school students (Butler, 1994). In study one, sixty Israeli primary school teachers stated what they would say to and feel about failing students because of low ability (LA) or low effort (LE). The teachers indicated that they would respond to

children with low ability with pity and would offer help. However, they indicated that they would feel anger toward the LE students (Butler, 1994).

In study two, a sample of third through sixth graders interpreted teacher communications for same-age students. Results indicated that students inferred greater anger in the LE condition, but attributed failure to effort in all conditions (Butler, 1994). Inferred teacher anger was directly and negatively correlated with predictions of subsequent effort. Predictions for future achievement strivings were most positive at all ages in the low ability condition (Butler, 1994).

In sum, these studies suggest that motivational deficits (e.g., academic achievement motivation) are often attributed to within-child variables. Further, when lack of effort is perceived as a cause for achievement problems, it is seen in a more negative light than failure as a result of lack of ability. This negative perception may elicit negative social responses that are perceived by the child through the teacher's feedback and behaviors. Such negative social responses may include overt rejection (i.e., negative evaluations), social avoidance of the depressed child, and expressed hostility. Academic achievement motivation may thus be viewed as an encompassing set of behaviors that serves to explain why a number of different types of children are rejected (e.g., ADHD, aggressiveness, depression, etc.). On the other hand, academic achievement motivation may represent a set of behaviors that are rejected *in addition* to behaviors associated with other childhood problem behaviors.

## Current Study

The primary purpose of this study was to discern whether specific types of behaviors exhibited by children in the school environment elicit negative social responding on the part of the teacher. Previous studies that have examined the interpersonal aspects of child depression in the school environment have demonstrated that adults characteristically reject depressed children and adolescents, and that this rejection fosters a depressogenic environment that serves to enforce negative self-views (e.g., Mullins et al., 1995; Pace et al., 1999). Expanding on this research, the current study postulated that self-reported child depressive symptomatology and academic achievement motivation are two specific behavioral patterns within the school environment that serve to elicit negative social responding, thereby maintaining depression. Thus, the current study examined the following hypotheses:

1. Higher levels of children's depressive symptomatology will be associated with higher levels of negative social responding.
  - a. Higher levels of children's depressive symptomatology will be associated with lower levels of interpersonal attractiveness.
  - b. Higher levels of children's depressive symptomatology will be associated with higher levels of interpersonal rejection.
2. Lower levels of academic achievement motivation will be associated with higher levels of negative social responding.
  - a. Lower levels of academic achievement motivation will be associated with higher levels of interpersonal rejection.



- b. Lower levels of academic achievement motivation will be associated with higher levels of interpersonal rejection.
3. The relationship between children's depressive symptomatology and negative social responding will be stronger at Time 2 than at Time 1.
  4. The relationship between academic achievement motivation and negative social responding will be stronger at Time 2 than at Time 1.

## CHAPTER III

### METHODOLOGY

#### Participants

Students from five public elementary schools located in two Midwestern cities, their parents, and their teachers were included in the study. The sample included 29 male children and 25 female children ranging from 9 to 11 years old ( $M = 10.2$ ,  $SD = .77$ ). Twenty-four of the participants were in the fourth grade and 30 were in the fifth grade. Ethnic composition of the sample was 52 (96%) Caucasian, 1 (2%) African American, and 1 (2%) listed as other. Over half of the parents (62%) reported a yearly income of \$51,000 or more, with 20% earning between \$31,000 and \$50,000, and 18% earning between \$21,000 - \$30,000. Over half of the parents (59%) reported earning a college or postgraduate degree, 22% earned some college credit, and 19% obtained a high school diploma.

#### Procedure

In keeping with each school district's policy concerning research, materials (i.e., Institutional Review Board [IRB] approval, purpose of study, protocols) were submitted accordingly to administrative personnel in order to obtain approval for the project. Once

approved, each of the elementary school principals were contacted to request their participation in the study. Subsequently, the researcher met with the principal and participating teachers at each school in order to discuss the specific nature of the study (i.e., purpose, research conditions, confidentiality).

Participating fourth and fifth grade teachers were required to complete consent forms. Likewise, requests for participation (i.e., consent form) were sent home to parents with each student. Only those students whose parents agreed to participate in the study were included. The consent forms were in accordance with the policies of the University Institutional Review Board (IRB) and the American Psychological Association (APA, 1992).

The study was a longitudinal design that consisted of two assessment sessions. The assessment sessions were conducted in the Fall (October) and Spring (April) of the school year. Each assessment session was conducted using the same format and instructions. For students and teachers, each session was conducted at their respective schools. Participating students completed an assent form for participation and the Children's Depression Inventory in small groups at a designated area (i.e., gymnasium, cafeteria). In keeping with ethical standards and guidelines of the IRB, all of the CDIs were scored within a 24-hour period. After each CDI was scored, the results were evaluated. None of the scores indicated that a child was severely depressed.

Parent packets were sent home the day of testing with each participating student. The parents were asked to complete three packets (e.g., background information, CBCL,

Child Checklist). All of the parent questionnaires were completed and returned within two weeks of the testing date.

The teachers were asked to complete three questionnaires (TRAAM, TRIA, TRPR) for all participating students in the classroom. All of the teachers' questionnaires were completed and returned within two weeks of the testing date.

Students, teachers, and parents were offered reimbursement for their participation. Students who returned their consent forms, regardless of whether or not they participated, were entered into a raffle for a \$15.00 Hastings gift certificate. Students who participated in the study received baseball or Superhero cards and bubble gum. Teachers who completed and returned their questionnaires by the assigned date, were entered into two raffles. The prize for each raffle was a \$25.00 Walmart gift certificate. The first raffle was held after the Fall testing session and the second raffle was held after the Spring testing session.

### Measures

Child participants in the study completed the Children's Depression Inventory (CDI). Parents completed a background information form and the Child Behavior Checklist. Teacher participants completed the Teacher Rating Scale of Academic Achievement Motivation (TRAAM), the Teacher's Ratings of Student Interpersonal Attractiveness (TRIA), and the Teacher's Ratings of Personal Rejection Toward Students (TRPR).

Teacher's Ratings of Student Interpersonal Attractiveness (TRIA): (Pace et al., 1999). This is a 20-item scale designed to assess an overall impression of interpersonal attractiveness that includes behavioral, intellectual, and physical dimensions. The TRIA will be used as a dependent variable/criterion in analyses. The measure consists of 20 items that are rated by teachers on a 7-point Likert scale. Items are anchored with adjectives that represent the extremes of interpersonal characteristics (i.e., cute to plain; pleasant to unpleasant). The total score of the 20 items are used to indicate teachers' perceptions of the interpersonal attractiveness of each child. Total scores may range from 20-140 with higher scores indicating less interpersonal attractiveness. Coefficient alpha for the scale is .96 (Pace et al., 1999). Similar scales have been used successfully in previous research on social responding to depression in children (Mullins et al., 1986; Peterson et al., 1985).

Teacher's Ratings of Personal Rejection Toward Students (TRPR): (Pace et al., 1999), is a ten item scale designed to measure teacher's attitudes toward students within the context of common types of interactions in elementary school settings. The TRPR was used as a dependent variable/criterion in analyses. Teachers are asked to indicate their willingness to interact with a child in specific types of activities (i.e., "sit beside him/her on a three-hour bus trip"; "take him/her to the zoo for a day"). Each item is rated by respective teachers on a 7-point Likert scale. The summed total of the ten items is used to measure personal rejection, with higher scores indicating greater personal rejection (Pace et al., 1999). The scale items were adapted from Hammen and Peters (1978). Coefficient alpha was found to be .97 for this scale. Similar scales have been

used successfully in previous research on social responding to depression in children (Mullins et al., 1986; Peterson et al., 1985).

Teacher Ratings of Academic Achievement Motivation (TRAAM): (Stinnett & Oehler-Stinnett, 1992) is a 37-item teacher rating scale that measures academic motivation in second through sixth grade students. The TRAAM was used as an independent variable/ predictor in analyses. The TRAAM consists of descriptive statements that the teacher rates the student on using a five-point Likert scale, with a = strongly agree to e = strongly disagree (Oehler-Stinnett & Stinnett, 1992). High scores reflect positive judgments by the rater.

Factor analysis of the TRAAM yielded four factor scales: (a) Amotivation, (b) Mastery, (c) Academic-Cognitive Skills, and (d) Academic Work Completion. These four scales combine to provide the TRAAM Total Score. The Amotivation scale measure's a child's tendency to avoid schoolwork, give up easily, and prefer tasks that are below their level of competence. Items on the Mastery scale describe student behaviors related to curiosity about and approach toward new and challenging tasks and persistence and maintenance of effort when confronted with difficulty, challenging tasks (Oehler-Stinnett & Stinnett, 1992). Factor 3, Academic-Cognitive Skills, reflects the teachers' judgements of the child's academic and cognitive skill, ability to succeed on school-related tasks, and to comprehend grade level material. Lastly, the fourth factor, Academic Work Completion, reflects the child's completion of English/spelling, mathematics, reading, science, and social studies assignments without teacher prompting.

This score gives an estimate of overall motivation and adjustment for school (Oehler-Stinnett & Stinnett, 1992).

The TRAAM factors have excellent internal consistency. In one study, researchers found coefficient alphas on the TRAAM to be: Factor I (Amotivation)=. 94, Factor II (Mastery)=. 95, Factor III (Academic-Cognitive Skills)=. 87, and Factor IV (Academic Work Completion)=. 92 (Sutkiewicz, Shircel, & Stinnett, 1995). The TRAAM also has acceptable test-retest and inter-rater reliabilities (Sutkiewicz et al., 1995). Test-retest correlations that were based on a one-month interval were: .82 (Factor I), .85 (Factor II), .78 (Factor III), .73 (Factor IV), and .84 (Total Score). All TRAAM factors had very good inter-rater reliabilities [(.81, .79, .75, and .75 for Factors I through IV respectively)(Sutkiewicz et al., 1995)]. The Total Score inter-rater reliability was .86.

Criterion-related validity for the four-factor TRAAM was demonstrated by examining its relationship with teacher judgements of student academic performance in the classroom ( $r$ 's ranged from .41 to .78) and student performance on a standardized achievement test ( $r$ 's ranged from .33 to .42) (Oehler-Stinnett & Stinnett, 1992). In addition, construct validity of the TRAAM has been significantly correlated with academic intrinsic motivation, orientation, and social skills (Oehler-Stinnett & Stinnett, 1992). Overall, these results indicate that the TRAAM has good reliability and validity for research and clinical purposes.

Child Behavior Checklist (CBCL): (Achenbach & Edelbrock, 1983) is a 138-item scale designed for parents to rate their child on social competence and behavioral problems. The items are rated using a 0-1-2 indexing of how true the item is of the child

now and within the past 6 months [(0, behavior is “not true”; 1, behavior “sometime or somewhat true”; and 2, behavior is “very true or often true”)(Achenbach & Edelbrock, 1983)]. The CBCL has two broad band factors, Externalizing and Internalizing. Under each band are several narrow-band syndromes for each age and sex group (i.e., anxious, inattentive, social withdrawal). In general, “internalizing” syndromes pertain to problems within an individual such as anxiety or depression, whereas “externalizing” syndromes consist of acting-out behaviors such as aggression and hyperactivity (Achenbach & Edelbrock, 1983).

The parent version of the CBCL has adequate reliability. Test-retest reliability coefficients for the narrow-band factors range from .61 (Obsessive-Compulsive) to .96 (Hyperactive) with a median one week test-retest reliability coefficient of .81 (Achenbach & Edelbrock, 1983). The broad-band factors had one week stability coefficients of .82 for Internalizing and .91 for Externalizing. Reliability coefficients for the total scales were generally in the low .90s (Achenbach & Edelbrock, 1983).

The parent version of the CBCL has considerable data to suggest that it is measuring what it is supposed to measure. More specifically, the parent version has been shown to correlate significantly with similar instruments. The CBCL was used in the study as a secondary measure of children’s depressive symptomatology. Its inclusion in the study will be dependent upon the parent response rate.

Children’s Depression Inventory (CDI):(Kovacs & Beck, 1977) is a 27-item self-rated symptom scale designed to assess depressive symptomatology in children aged 8- to 17-years old. The inventory assesses commonly accepted symptoms of depression



that the child has experienced within the two weeks prior to completing the inventory.

The CDI was used as an independent variable/predictor in analyses.

Each of the 27 items that comprise the CDI describes a different symptom of childhood depression. These symptoms include disturbances in mood and hedonic capacity, vegetative functions, self-evaluation, and interpersonal behaviors (Kovacs & Beck, 1977). Several items also evaluate the child's functioning in the school environment.

The CDI yields a total score that reflects the severity of depressive symptoms. Factor analysis of the CDI yielded five factor scales: 1) Negative Mood, 2) Interpersonal Problems, 3) Ineffectiveness, 4) Anhedonia, and 5) Negative Self-Esteem.

The reliability of the CDI has been evaluated through internal consistency and test-retest reliability. Kovacs (1983) found acceptable internal consistency (coefficient alpha = .86) as did Kazdin and colleagues who reported an internal consistency of  $r = .82$  (Kazdin, French, & Unis, 1983). With regard to test-retest reliability, Kovacs (1983) reported a moderately high test-retest correlation coefficient of .82 for a one-month interval. Test-retest reliability was also found to be .51 (two weeks), .77 (three weeks), .43 (one month), and .69 (one year) (Friedman & Butler, 1979).

## CHAPTER IV

### RESULTS

#### Overview of Analyses

Before running primary analyses to determine the effect(s) of self-reported child depression and academic achievement motivation on negative social responding (i.e., interpersonal attractiveness, interpersonal rejection), preliminary tests (zero-order correlations) were conducted to clarify the relationships between each of the study variables and possible covariates. A zero-order correlation matrix was constructed in order to examine possible relationships between demographic variables (e.g., age, family income, gender, grade), self-reported child depression, teachers' ratings of interpersonal attractiveness and interpersonal rejection, and academic achievement motivation. Child ethnicity was not included as a demographic variable because less than four percent of the sample population was identified as non-Caucasian.

In addition, the means and standard deviations of demographic variables, self-reported child depression, teachers' ratings of interpersonal attractiveness and interpersonal rejection, and academic achievement motivation were obtained. Additionally, the means of self-reported child depression, teachers' ratings of interpersonal attractiveness and interpersonal rejection and academic achievement

motivation were compared at Time 1 and Time 2 using two-tailed dependent t tests to assess for change across time on these scores.

To address hypotheses 1 and 2, a total of four hierarchical regression analyses were conducted (see Figure 1). The criterion variable, negative social responding, was defined in one of two ways: (1) teachers' ratings of interpersonal attractiveness and (2) teacher's ratings of interpersonal rejection. The predictor variables were demographic variables (i.e., age, family income, gender, grade), and either self-reported child depression or academic achievement motivation. Thus, the first two regression analyses both addressed hypothesis 1, which predicted that higher levels of self-reported child depression would be associated with higher levels of the criterion variable, negative social responding. The independent variables were demographic variables (i.e., age, family income, gender, grade) and self-reported child depression. The independent variables were entered on steps 1 and 2 of the regression analyses, respectively.

The next two regression analyses addressed hypothesis 2, which predicted that lower levels of academic achievement motivation would be associated with higher levels of the criterion variable, negative social responding. The independent variables were demographic variables (i.e., age, family income, gender, grade) and academic achievement motivation. They were entered on steps 1 and 2, respectively.

All predictor variables were entered in according to the transactional stress and coping model (Thompson et al., 1993a; Thompson & Gustafson, 1996). In accordance with the transactional stress and coping model, the predictor variables were entered in two steps. On step one of the equation, demographic variables (i.e., age, family income,

gender, grade) were entered as a block. Either self-reported child depression or academic achievement motivation was then entered on step two of the equation. The  $R^2$  (explained variance) was then analyzed by increments as to the proportion of the variance explained due to the addition of each new variable entered in the hierarchy (Cohen & Cohen, 1983).

As this study was designed to be a longitudinal design consisting of two assessment sessions, one in the Fall and one in the Spring, each of the aforementioned regression analyses was also conducted at Time 2.

In addition to these series of regression analyses, two regression analyses were conducted in order to identify which of the hypothesized independent variables (i.e., self-reported child depression, academic achievement motivation) was the stronger predictor of negative social responding. In the first regression analysis, the dependent variable was interpersonal attractiveness. Interpersonal rejection was the dependent variable in the second regression analysis. The independent variables for both analyses were demographic variables (i.e., age, family income, gender, grade), self-reported child depression, and academic achievement motivation. Demographic variables were entered on step 1 of each regression analysis and self-reported child depression and academic achievement motivation were entered simultaneously on step 2.

Lastly, cross-lagged panel correlations were conducted to address hypotheses 3 and 4. Hypothesis 3 predicted that the relationship between self-reported child depression and negative social responding would be stronger at Time 2 than at Time 1. Hypothesis 4 predicted that the relationship between academic achievement motivation and negative social responding would be greater at Time 2 than at Time 1.

### Preliminary Analyses

All means and standard deviations for the study variables at Time 1 and Time 2 can be found in Tables 1 and 2, respectively. Results of the zero-order correlation matrix indicated that a significant relationship emerged between child age and teachers' ratings of interpersonal rejection and family income and teachers' ratings of interpersonal attractiveness (see Tables 4 and 5).

Results of the two-tailed dependent t-tests indicated no significant increase or decrease in means for self-reported child depression from Time 1 to Time 2. However, the results indicated that the means for academic achievement motivation significantly decreased from Time 1 to Time 2. Thus, over time, the teachers rated the students as less motivated to achieve academically. Furthermore, the means for teachers' ratings of interpersonal attractiveness and interpersonal rejection significantly increased from Time 1 to Time 2. Thus, over time, the teachers rated the students more negatively [(i.e., decrease in interpersonal attractiveness, increase in interpersonal rejection)(see Table 3)].

To further discern the characteristics of the sample, depression scores were examined in terms of maladaptation. For the CDI, a score at or above the 90<sup>th</sup> percentile defined the criteria for maladaptation, which is a cutoff raw score of 20 (Kovacs, 1983). Based on these criteria, there were no positive cases in the study sample. Thus, it appeared that the sample represented a nondepressed group of children.

Table 1

Means and Standard Deviations of Demographic Variables, Self-Reported Child  
Depressive Symptomatology, Academic Achievement Motivation,  
And Negative Social Responding at Time 1

Category	n	M	SD
Children	54		
Age		10.2	.77
Gender			
Boys	29		
Girls	25		
Grade			
Fourth	24		
Fifth	30		
Family Income		4.5	.84
CDI		6.26	4.61
TRIA <sup>a</sup>		36.60	18.81
TRPR <sup>b</sup>		24.85	12.08
TRAAM		192.76	32.78

Note. CDI = Children's Depression Inventory; TRIA = Teacher Ratings of Interpersonal Attractiveness; TRPR = Teacher Ratings of Interpersonal Rejection; TRAAM = Teacher Ratings of Academic Achievement Motivation.

<sup>a</sup>Higher scores on the TRIA indicate less interpersonal attractiveness. <sup>b</sup>Higher scores on the TRPR indicate greater interpersonal rejection.

Table 2

Means and Standard Deviations of Demographic Variables, Self-Reported Child Depressive Symptomatology, Academic Achievement Motivation, And Negative Social Responding at Time 2

Category	n	M	SD
Children	54		
Age		10.2	.77
Gender			
Boys	29		
Girls	25		
Grade			
Fourth	24		
Fifth	30		
Family Income		4.5	.84
CDI		6.07	4.72
TRIA <sup>a</sup>		39.43	20.28
TRPR <sup>b</sup>		30.17	16.45
TRAAM		143.48	11.53

Note. CDI = Children's Depression Inventory; TRIA = Teacher Ratings of Interpersonal Attractiveness; TRPR = Teacher Ratings of Interpersonal Rejection; TRAAM = Teacher Ratings of Academic Achievement Motivation.

<sup>a</sup>Higher scores on the TRIA indicate less interpersonal attractiveness. <sup>b</sup>Higher scores on the TRPR indicate greater interpersonal rejection.

Table 3

Two-Tailed Dependent T-tests for Self-Reported Child Depressive Symptomatology,  
Academic Achievement Motivation, and Negative Social Responding

Study Variable Pairs	df	Significance level (two-tailed)
CDI Total Score at Time 1 – CDI Total Score at Time 2	53	.769
TRIA Total Score at Time 1 – TRIA Total Score at Time 2	53	.015**
TRPR Total Score at Time 1 – TRPR Total Score at Time 2	53	.019**
TRAAM Total Score at Time 1 – TRAAM Total Score at Time 2	53	.001**

Note: CDI = Children's Depression Inventory; TRIA = Teacher Ratings of Interpersonal Attractiveness; TRPR = Teacher Ratings of Interpersonal Rejection; TRAAM = Teacher Ratings of Academic Achievement Motivation.

\*\*p<.01.

Pearson product-moment correlations were next examined as a preliminary means of investigating the relationships between demographic variables, self-reported child depression, negative social responding (i.e., interpersonal attractiveness, interpersonal rejection), and academic achievement motivation at Time 1 (see Table 4) and at Time 2 (see Table 5).



Table 4

Correlations Among Demographic Variables, Self-Reported Child Depressive Symptomatology, Academic Achievement Motivation, and Negative Social Responding at Time 1

	Child Age	Child Gender	Child Grade	Family Income	CDI	TRIA <sup>a</sup>	TRPR <sup>b</sup>	TRAAM
Age	1.00	-.04	.65**	-.03	.06	-.03	-.28*	-.02
Gender		1.00	-.07	-.09	.14	-.12	-.04	-.05
Grade			1.00	-.07	-.02	.09	-.39**	-.03
Income				1.00	-.05	-.43**	-.12	.26
CDI					1.00	.28*	.31*	-.30*
TRIA						1.00	.35**	-.60**
TRPR							1.00	-.29*
TRAAM								1.00

Note. CDI = Children's Depression Inventory; TRIA = Teacher Ratings of Interpersonal Attractiveness; TRPR = Teacher Ratings of Interpersonal Rejection; TRAAM = Teacher Ratings of Academic Achievement Motivation.

<sup>a</sup>Higher scores on the TRIA indicate less interpersonal attractiveness, <sup>b</sup>Higher scores on the TRPR indicate greater interpersonal rejection.

\* $p < .05$  \*\* $p < .01$ .

#### Time 1 Correlation Results

##### Demographics

Results of the correlational analyses indicated that age was significantly correlated with both grade and teachers' ratings of interpersonal rejection (see Table 4).

As would be expected, results indicated that age was positively correlated with grade ( $r = .65, p < .01$ ). Secondly, age was negatively associated with teachers' ratings of interpersonal rejection ( $r = -.28, p < .05$ ), thus, the older the child, the lower the ratings of rejection.

Table 5

Correlations Among Demographic Variables, Self-Reported Child Depressive Symptomatology, Academic Achievement Motivation, and Negative Social Responding at Time 2

	Child Age	Child Gender	Child Grade	Family Income	CDI	TRIA <sup>a</sup>	TRPR <sup>b</sup>	TRAAM
Age	1.00	-.13	.60**	.14	-.07	.09	.08	-.13
Gender		1.00	-.06	-.09	-.18	-.09	.01	-.12
Grade			1.00	-.07	-.01	.20	.06	-.05
Income				1.00	-.09	-.30**	-.04	-.23
CDI					1.00	.44*	.07	.23
TRIA						1.00	.42**	-.27*
TRPR							1.00	-.08
TRAAM								1.00

Note. CDI = Children's Depression Inventory; TRIA = Teacher Ratings of Interpersonal Attractiveness; TRPR = Teacher Ratings of Interpersonal Rejection; TRAAM = Teacher Ratings of Academic Achievement Motivation.

<sup>a</sup>Higher scores on the TRIA indicate less interpersonal attractiveness, <sup>b</sup>Higher scores on the TRPR indicate greater interpersonal rejection.

\* $p < .05$  \*\* $p < .01$ .

Family income was found to be significantly correlated with teachers' ratings of interpersonal attractiveness ( $r = -.43, p < .01$ ), indicating that higher levels of family income were associated with greater interpersonal attractiveness. Gender was not significantly correlated with any of the study variables. Grade was found to be significantly correlated with teachers' ratings of interpersonal rejection ( $r = -.39, p < .01$ ), indicating that children in higher grades were rejected less.

Self-Reported Child Depressive Symptomatology, Academic Achievement Motivation, and Social Responding

Results of the correlation matrix indicated that self-reported child depressive symptomatology was significantly correlated with teachers' ratings of interpersonal attractiveness ( $r = .28, p < .05$ ), interpersonal rejection ( $r = .31, p < .05$ ) and academic achievement motivation ( $r = -.30, p < .05$ ). These results indicate that higher levels of self-reported child depressive symptomatology were associated with less interpersonal attractiveness and increased interpersonal rejection. Further, higher levels of self-reported child depression were associated with lower levels of academic achievement motivation. Overall, these results indicate that higher levels of self-reported child depressive symptomatology were associated with greater negative social responding (i.e., less interpersonal attractiveness, greater interpersonal rejection).

Academic achievement motivation was found to be significantly associated with teachers' ratings of interpersonal attractiveness ( $r = .60, p < .01$ ) and interpersonal rejection ( $r = -.29, p < .05$ ). Overall, these results suggest that the more academically

motivated the teachers perceived the students to be, the less they responded negatively towards them (i.e., greater interpersonal attractiveness, less interpersonal rejection).

## Time 2 Correlation Results

### Demographics

Results of the correlational analyses indicated that age was significantly correlated with grade at Time 2 [( $r = .60$ ,  $p < .01$ )(see Table 5)]. These results were consistent with results obtained at Time 1. Inconsistent with results obtained at Time 1, age was not significantly correlated with teachers' ratings of interpersonal rejection.

Family income was found to be significantly correlated with teachers' ratings of interpersonal attractiveness ( $r = -.30$ ,  $p < .05$ ), indicating that higher levels of family income were associated with greater interpersonal attractiveness. This result is consistent with results obtained at Time 1. Also consistent with Time 1 results, gender was not significantly correlated with any of the study variables. Inconsistent with Time 1 results, grade was not significantly correlated with teachers' ratings of interpersonal rejection.

### Self-Reported Child Depressive Symptomatology, Academic

#### Achievement Motivation, and Social Responding

Results of the correlational analyses indicated that self-reported child depression was significantly correlated with teachers' ratings of interpersonal attractiveness ( $r = .44$ ,  $p < .05$ ), indicating that higher levels of self-reported child depressive symptomatology were associated with less interpersonal attractiveness. This result is consistent with

results obtained at Time 1. Inconsistent with Time 1 results, self-reported child depressive symptomatology was not significantly correlated with teachers' ratings of interpersonal rejection or academic achievement motivation.

Academic achievement motivation was found to be significantly correlated with teachers' ratings of interpersonal attractiveness ( $r = -.27, p < .05$ ), indicating that higher levels of academic achievement motivation were associated with greater interpersonal attractiveness. This finding is consistent with results obtained at Time 1. Academic achievement motivation was not found to be significantly associated with teachers' ratings of interpersonal rejection. This finding is inconsistent with results obtained at Time 1.

#### Time 1 Regression Analyses

Regression analyses were next conducted as a primary means of investigating hypotheses 1 and 2. Hypothesis 1 predicted that lower levels of self-reported child depressive symptomatology would be associated with higher levels of negative social responding, and hypothesis 2 predicted that lower levels of academic achievement motivation would be associated with higher levels of negative social responding.

The first set of regression analyses investigated hypothesis 1 (see Tables 6 and 7). In each table, the beta weights, partial correlations,  $R^2$  changes for each step, and cumulative  $R^2$  are indicated. Also indicated is the F-change for each step.

Table 6

Hierarchical Regression Analysis Predicting Teachers' Ratings  
of Interpersonal Attractiveness From Self-Reported Child  
Depressive Symptomatology at Time 1

Variable	B	SE	T for Partial Regression coefficients	F for set	R <sup>2</sup> change for step	Cumulative R <sup>2</sup>
Step 1						
Child Age	-.14	4.47	-.85	3.51	.22**	.22**
Child Gender	-.14	4.75	-1.14			
Child Grade	.14	6.26	.86			
Family Income	-.44	2.84	-3.45**			
Step 2						
CDI	.30	.50	2.45	6.01	.09*	.31**

Note. CDI = Children's Depression Inventory.

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

Table 7

Hierarchical Regression Analysis Predicting Teachers' Ratings  
of Interpersonal Rejection From Self-Reported Child  
Depressive Symptomatology at Time 1

Variable	B	SE	T for Partial Regression coefficients	F for set	R <sup>2</sup> change for step	Cumulative R <sup>2</sup>
Step 1						
Child Age	-.04	2.95	-.25	2.66	.18*	.18*
Child Gender	-.07	3.13	-.56			
Child Grade	-.38	4.14	-2.20*			
Family Income	-.15	1.88	-1.17			
Step 2						
CDI	.32	.33	2.5	6.50	.10*	.28*

Note. CDI = Children's Depression Inventory.

\* $p < .05$ .

As can be seen in Table 6, results of the analyses indicated that demographic variables were significant predictors of teachers' ratings of interpersonal attractiveness ( $F(4, 53) = 3.51, p < .05$ ), accounting for 22% of the variance. Further examination of the demographic variables revealed that only family income contributed significant unique variance to interpersonal attractiveness at Time 1 ( $t = 11.90, p < .01$ ). Additionally, self-reported child depressive symptomatology was also found to be a significant predictor of teachers' ratings of interpersonal attractiveness ( $F(5, 53) = 6.01, p < .05$ ), accounting for 9% of the variance. This finding indicates that children with higher levels of depressive symptomatology are seen as less interpersonally attractive.

Table 7 summarizes the results when the criterion variable was interpersonal rejection. Results of the analyses indicated that demographic variables were significant predictors of teachers' ratings of interpersonal rejection ( $F(4, 53) = 2.66, p \leq .05$ ), accounting for 18% of the variance. Further examination of the demographic variables revealed that only child grade contributed significant unique variance to interpersonal rejection at Time 1 ( $t = 4.84, p < .05$ ). Also, higher levels of self-reported child depressive symptomatology were associated with higher levels of interpersonal rejection ( $F(5, 53) = 6.50, p \leq .05$ ), accounting for 10% of the variance.

Regression analyses were next conducted to investigate hypothesis 2, which predicted that lower levels of academic achievement motivation would be associated with greater negative social responding. Tables 8 and 9 summarize the results of each regression analysis at Time 1.

Table 8

Hierarchical Regression Analysis Predicting Teachers' Ratings  
of Interpersonal Attractiveness From Academic  
Achievement Motivation at Time 1

Variable	B	SE	T for Partial Regression coefficients	F for set	R <sup>2</sup> change for step	Cumulative R <sup>2</sup>
Step 1						
Child Age	-.14	4.47	-.85	3.51	.22**	.22**
Child Gender	-.14	4.75	-1.14			
Child Grade	.14	6.26	.86			
Family Income	-.44	2.84	-3.45**			
Step 2						
TRAAM	.53	.06	-4.93	24.93	.27**	.49**

Note. TRAAM = Teacher Ratings of Academic Achievement Motivation.  
 \*p<.05, \*\*p<.01.

Table 9

Hierarchical Regression Analysis Predicting Teachers' Ratings  
of Interpersonal Rejection From Academic Achievement  
Motivation at Time 1

Variable	B	SE	T for Partial Regression coefficients	F for set	R <sup>2</sup> change for step	Cumulative R <sup>2</sup>
Step 1						
Child Age	-.04	2.95	-.25	2.66	.18*	.18*
Child Gender	-.07	3.13	-.56			
Child Grade	-.38	4.14	-2.20*			
Family Income	-.15	1.88	-1.17			
Step 2						
TRAAM	-.29	.05	-2.12	4.90	.07*	.25*

Note. TRAAM = Teacher Ratings of Academic Achievement Motivation.  
 \*p<.05.



Table 8 summarizes the results when the criterion variable was interpersonal attractiveness and demographic variables and academic achievement motivation were the predictor variables. Results of the analyses indicate that demographic variables were significant predictors of teachers' ratings of interpersonal attractiveness ( $F(4, 53) = 3.51$ ,  $p < .05$ ), accounting for 22% of the variance. Further analysis of the demographic variables revealed that only family income contributed significant unique variance to interpersonal attractiveness ( $F = 11.90$ ,  $p < .01$ ). After controlling for the influence of demographic variables, higher levels of academic achievement motivation were associated with lower teacher ratings of interpersonal attractiveness ( $F(5, 53) = 24.93$ ,  $p < .01$ ), accounting for 27% of the variance. These results indicate that higher levels of academic achievement motivation are associated with greater attractiveness.

Table 9 summarizes the results of the regression analyses using interpersonal rejection as the criterion variable, and with demographic variables and academic achievement motivation as the predictor variables. Results of the analyses indicated that demographic variables were significantly associated with teachers' ratings of interpersonal rejection ( $F(4, 53) = 2.66$ ,  $p < .05$ ), accounting for 18% of the variance. Further examination of the demographic variables revealed that only child grade contributed significant unique variance to interpersonal rejection ( $t = 4.84$ ,  $p < .05$ ). Additionally, higher levels of academic achievement motivation were associated with lower levels of interpersonal rejection, ( $F(5,53) = 4.90$ ,  $p < .05$ , after controlling for the demographic variables. Academic achievement motivation accounted for 7% of the variance. This finding indicates that higher levels of academic achievement motivation

are associated with less rejection, or conversely, lower levels of academic achievement motivation are associated with more rejection.

Regression analyses were next conducted to identify which of the hypothesized independent variables (i.e., self-reported child depressive symptomatology, academic achievement motivation) was the best predictor of negative social responding (i.e., interpersonal attractiveness, interpersonal rejection). Tables 10 and 11 summarize the results of each of the regression analyses at Time 1.

Table 10

Hierarchical Regression Analysis Predicting Teachers' Ratings  
of Interpersonal Attractiveness from Self-Reported Child  
Depressive Symptomatology, and Academic  
Achievement Motivation at Time 1

Variable	B	SE	T for Partial Regression coefficients	F for set	R <sup>2</sup> change for step	Cumulative R <sup>2</sup>
Step 1						
Child Age	-.14	4.47	-.85	3.51	.22**	.22**
Child Gender	-.14	4.75	-1.14			
Child Grade	.14	6.26	.86			
Family Income	-.44	2.84	-3.45**			
Step 2						
CDI	.16	.44	1.43	13.80	.29**	.51**
TRAAM	-.49	.06	-4.38**			

Note. CDI = Children's Depression Inventory; TRAAM = Teacher Ratings of Academic Achievement Motivation.

\*p<.05, \*\*p<.01.

Table 11

Hierarchical Regression Analysis Predicting Teachers' Ratings  
of Interpersonal Rejection From Self-Reported Child  
Depressive Symptomatology, and Academic  
Achievement Motivation at Time 1

Variable	B	SE	T for Partial Regression coefficients	F for set	R <sup>2</sup> change for step	Cumulative R <sup>2</sup>
Step 1						
Child Age	-.04	2.95	-.25	2.66	.18*	.18*
Child Gender	-.07	3.13	-.56			
Child Grade	-.38	4.14	-2.20*			
Family Income	-.15	1.88	-1.17			
Step 2						
CDI	.26	.34	1.99	4.59	.13*	.31**
TRAAM	-.21	.05	-1.58			

Note. CDI = Children's Depression Inventory, TRAAM = Teacher Ratings of Academic Achievement Motivation.

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

Table 10 summarizes the results when the criterion variable was interpersonal attractiveness and demographic variables, self-reported child depressive symptomatology, and academic achievement motivation were the predictor variables. Results of the analysis indicated that demographic variables were found to be significant predictors of teachers' ratings of interpersonal attractiveness, ( $F(4, 53) = 3.51, p \leq .05$ ). Demographic variables accounted for 22% of the variance. Further examination of the demographic variables revealed that family income contributed significant unique variance to interpersonal attractiveness ( $t = 11.90, p < .01$ ). After controlling for their influences,

self-reported child depressive symptomatology and academic achievement motivation were both entered as a block in the regression analysis. Overall, self-reported child depression and academic achievement motivation were found to be significantly associated with teachers' ratings of interpersonal attractiveness, ( $F(6, 53) = 13.80$ ,  $p < .01$ ), accounting for 29% of the variance. Further analysis of these variables revealed that only academic achievement motivation contributed significant unique variance to interpersonal attractiveness ( $t = 19.18$ ,  $p < .01$ ), indicating that children who are seen as more academically motivated in the classroom are rejected less.

Table 11 summarizes the results when the criterion variable was interpersonal rejection and demographic variables, self-reported child depressive symptomatology, and academic achievement motivation were the predictor variables. Results of the analysis indicated that demographic variables were found to be significant predictors of teachers' ratings of interpersonal rejection ( $F(4, 53) = 2.66$ ,  $p < .05$ ), accounting for 18% of the variance. Further examination of the demographic variables revealed that only child grade contributed significant unique variance to interpersonal rejection ( $t = 4.84$ ,  $p < .05$ ). After controlling for their influences, self-reported child depressive symptomatology and academic achievement motivation were associated with interpersonal rejection, ( $F(6, 53) = 4.59$ ,  $p < .05$ ), indicating that, when entered as a block, self-reported child depressive symptomatology and academic achievement motivation were significant predictors of interpersonal rejection at Time 1. Further examination of these variables revealed that neither variable alone was significant.

## Time 2 Regression Analyses

A second series of regression analyses were conducted as a primary means of investigating hypotheses 1 and 2 at Time 2. Tables 12 and 13 summarize the results of hypothesis 1, which predicted that higher levels of self-reported child depressive symptomatology would be associated with higher levels of negative social responding.

Table 12

Hierarchical Regression Analysis Predicting Teachers' Ratingsof Interpersonal Attractiveness From Self-Reported ChildDepressive Symptomatology at Time 2

Variable	B	SE	T for Partial Regression coefficients	F for set	R <sup>2</sup> change for step	Cumulative R <sup>2</sup>
Step 1						
Child Age	.01	4.52	-.07	1.95	.14	.14
Child Gender	-.11	5.40	-.83			
Child Grade	.17	6.86	.98			
Family Income	-.30	3.30	-2.21			
Step 2						
CDI	.42	.53	3.38**	11.4	.17**	.31**

Note. CDI = Children's Depression Inventory.

\*\*p<.01.

Table 13

Hierarchical Regression Analysis Predicting Teachers' Ratings  
of Interpersonal Rejection From Self-Reported Child  
Depressive Symptomatology at Time 2

Variable	B	SE	T for Partial Regression coefficients	F for set	R <sup>2</sup> change for step	Cumulative R <sup>2</sup>
Step 1						
Child Age	.08	3.93	.45	.12	.01	.01
Child Gender	.01	4.69	.06			
Child Grade	.01	5.96	.06			
Family Income	-.05	2.87	-.33			
Step 2						
CDI	.07	.51	.51	.26	.01	.02

Note. CDI = Children's Depression Inventory.

Table 12 summarizes the results of the regression analyses conducted with interpersonal attractiveness as the criterion variable and demographic variables and self-reported child depressive symptomatology as the predictor variables. Results of the analyses indicated that demographic variables were not a significant predictor of teachers' ratings of interpersonal attractiveness. These findings are inconsistent with the findings obtained at Time 1. Consistent with Time 1 results, level of self-reported child depressive symptomatology was found to be a significant predictor of teachers' ratings of interpersonal attractiveness, ( $F(5, 53) = 11.4, p < .01$ ), accounting for 17% of the variance. These results suggest that children with higher levels of depressive symptomatology rated as less interpersonally attractive.

Table 13 summarizes the regression results when the criterion variable was teachers' ratings of interpersonal rejection. Inconsistent with Time 1 findings, the results of the analyses indicated that neither demographic variables nor self-reported child depressive symptomatology were significantly associated with interpersonal rejection.

Tables 14 and 15 summarize the results of hypothesis 2 at Time 2. Hypothesis 2 predicted that lower levels of academic achievement motivation would be associated with higher teachers' ratings of negative social responding.

Table 14

Hierarchical Regression Analysis Predicting Teachers' Ratings  
of Interpersonal Attractiveness From Academic  
Achievement Motivation at Time 2

Variable	B	SE	T for Partial Regression coefficients	F for set	R <sup>2</sup> change for step	Cumulative R <sup>2</sup>
Step 1						
Child Age	.07	4.52	-.07	1.95	.14	.14
Child Gender	-.11	5.40	-.83			
Child Grade	.17	6.86	.98			
Family Income	-.30	3.30	-2.21			
Step 2						
TRAAM	.22	.24	1.60	2.57	.04	.18

Note. TRAAM = Teacher Ratings of Academic Achievement Motivation.

Table 15

Hierarchical Regression Analysis Predicting Teachers' Ratings  
of Interpersonal Rejection From Academic Achievement  
Motivation at Time 2

Variable	B	SE	T for Partial Regression coefficients	F for set	R <sup>2</sup> change for step	Cumulative R <sup>2</sup>
Step 1						
Child Age	.08	3.93	.45	.12	.01	.01
Child Gender	.01	4.69	.06			
Child Grade	.01	5.96	.06			
Family Income	-.05	2.87	-.33			
Step 2						
TRAAM	-.09	.21	-.59	.35	.01	.02

Note. TRAAM= Teacher Ratings of Academic Achievement Motivation

Table 14 summarizes the results of the regression analysis conducted with interpersonal attractiveness as the criterion variable and demographic variables and academic achievement motivation were the predictor variables. Results of the analyses indicated that neither demographic variables nor academic achievement motivation were significantly associated with teachers' ratings of interpersonal attractiveness. Such findings are inconsistent with the findings obtained at Time 1.

Table 15 summarizes the results of the regression analyses run with interpersonal rejection as the criterion variable and demographic variables and academic achievement motivation were the predictor variables. Inconsistent with the results obtained at Time 1,



the results indicated that neither demographic variables nor academic achievement motivation were significantly associated with teachers' ratings of interpersonal rejection.

Regression analyses were conducted at Time 2 to identify which of the hypothesized independent variables (i.e., self-reported child depression, academic achievement motivation) was the best predictor of negative social responding (i.e., interpersonal attractiveness, interpersonal rejection). Tables 16 and 17 summarize the results of each of the regression analyses.

Table 16

Hierarchical Regression Analysis Predicting Teachers' Ratings  
of Interpersonal Attractiveness from Self-Reported Child  
Depressive Symptomatology and Academic  
Achievement Motivation at Time 2

Variable	B	SE	T for Partial Regression coefficients	F for set	R <sup>2</sup> change for step	Cumulative R <sup>2</sup>
Step 1						
Child Age	-.04	5.08	-.21	1.96	.14	.14
Child Gender	-.11	5.39	-.83			
Child Grade	.20	7.11	1.13			
Family Income	-.30	3.22	-2.25			
Step 2						
CDI	.40	.54	3.12**	6.40	.18*	.32**
TRAAM	.14	.22	1.12			

Note. CDI = Children's Depression Inventory, TRAAM = Teacher Ratings of Academic Achievement Motivation.

\*p<.05, \*\*p<.01.

Table 17

Hierarchical Regression Analysis Predicting Teachers' Ratings  
of Interpersonal Rejection From Self-Reported Child  
Depressive Symptomatology and Academic  
Achievement Motivation at Time 2

Variable	B	SE	T for Partial Regression coefficients	F for set	R <sup>2</sup> change for step	Cumulative R <sup>2</sup>
Step 1						
Child Age	.09	3.93	.47	.12	.01	.01
Child Gender	-.01	4.69	-.01			
Child Grade	.01	5.96	.02			
Family Income	-.04	2.87	-.24			
Step 2						
CDI	.08	.53	.56	.38	.02	.03
TRAAM	-.16	.22	-.76			

Note. CDI = Children's Depression Inventory, TRAAM = Teacher Ratings of Academic Achievement Motivation.

Table 16 summarizes the results of the regression analysis when the criterion variable was interpersonal attractiveness and demographic variables, self-reported child depressive symptomatology, and academic achievement motivation were the predictor variables. Contrary to results obtained at Time 1, demographic variables were not found to be significant predictors of teachers' ratings of interpersonal attractiveness. Consistent with Time 1 results, when entered as a block, self-reported child depressive symptomatology and academic achievement motivation were significantly associated with teachers' ratings of interpersonal attractiveness ( $F(6, 53) = 6.40, p < .01$ ),

accounting for 18% of the variance. Further examination of these variables revealed that only self-reported child depressive symptomatology contributed significant unique variance to interpersonal attractiveness at Time 2 ( $t = 10.37, p < .01$ ), which is inconsistent with the finding at Time 1. These results suggest that the teachers viewed children with higher levels of depressive symptomatology as less attractive.

Table 17 summarizes the results when the criterion variable was interpersonal rejection and demographic variables, self-reported child depressive symptomatology, and academic achievement motivation were the predictor variables. Inconsistent with Time 1 findings, the results of the analyses indicated that none of the independent variables (i.e., demographic variables, self-reported child depressive symptomatology, academic achievement motivation) were significantly associated with interpersonal rejection.

#### Cross-Lagged Panel Correlations

Cross-lagged panel correlations were next conducted as a primary means of investigating hypotheses 3 and 4. Hypothesis 3 predicted that the relationship between child depressive symptomatology and negative social responding would be stronger at Time 2 than at Time 1. Hypothesis 4 predicted that academic achievement motivation and negative social responding would be stronger at Time 2 than at Time 1. A cross-lagged panel correlational analysis was selected to examine hypotheses 3 and 4 because it is a method that tests for spuriousness (i.e., participants were not randomly assigned). It is also a better method than multiple regressions or factor analysis in analyzing correlated data obtained from longitudinal studies (Kenny, 1975). However, before these primary

analyses were conducted, preliminary analyses were run to determine if any covariates were present.

### Preliminary Analyses

Selection of Covariates – Analyses were conducted to determine if any of the demographic variables (i.e., age, family income, gender, grade) were potential covariates in the cross-lagged panel analyses. Kenny (1975) postulated that a variable should demonstrate moderate association with the target variables at both assessment periods in order to be considered a covariate. According to the results of the correlation matrix, none of the demographic variables correlated with both the criterion variable and the predictor variable at both Time 1 and Time 2. Therefore, according to Kenny (1975), none of the demographic variables satisfied the conditions necessary to be considered covariates.

### Cross-Lagged Panel Analyses

Reliability, Synchronicity, and Stationarity – Although cross-lagged panel correlations are considered to be an exploratory analysis method, this research method still has a fairly strict set of statistical assumptions. In order for cross-lagged panel correlations to be appropriately interpreted, three assumptions must be satisfied. These assumptions include (a) reliability, (b) synchronicity, and (c) stationarity (Kenny, 1975).

According to Kenny (1975), an increase in an instrument's internal consistency *reliability* between assessment periods can artificially inflate associations between

variables and can influence the interpretation of cross-lag comparisons. To determine the stability of internal consistency over time, each of the study variables was examined to compare internal reliabilities at Time 1 and Time 2.

Additionally, the test-retest reliabilities (i.e., autocorrelations) for each study variable should be acceptable. These reliabilities can be seen in Table 18. The resultant internal consistency reliability coefficient for the TRAAM was not stable. In addition, unacceptable test-retest reliabilities for the CDI, TRPR, and TRAAM were observed over the 6-month period. The test-retest reliability coefficient for the TRIA was acceptable.

Table 18

Internal Consistency and Test-Retest Reliabilities for the  
CDI, TRIA, TRPR, and TRAAM

Test Instruments	Internal Consistency		Test-Retest
	T1	T2	
CDI	.77	.77	.51
TRIA	.97	.96	.91
TRPR	.86	.95	.45
TRAAM	.97	.24	-.11

Note. CDI = Children's Depression Inventory; TRIA = Teacher Ratings of Interpersonal Attractiveness; TRPR = Teacher Ratings of Interpersonal Rejection; TRAAM = Teacher Ratings of Academic Achievement Motivation.  
n=54.

The second assumption that needs to be satisfied is synchronicity, or the simultaneous measurement of both variables over time. More specifically, synchronicity means that the time that elapsed between assessment periods (Time 1 to Time 2) did not significantly vary for the participants. All of the participants were assessed at approximately the same time during the Fall (i.e., October) and Spring (i.e., April) of each school year. Although absolute synchronicity was not achieved in this study, only minimal temporal variation in test-retest intervals was observed during the study period ( $M = 6.1$  months,  $SD = .4$ ).

The third and last assumption to be satisfied was stationarity, or the consistency in strength and direction of synchronous correlations between the target variables over time (i.e., cross-sectional correlations). The assumption of stationarity was examined by comparing the following four pairs of synchronous  $r$ 's: (a) teachers' ratings of interpersonal attractiveness and self-reported child depressive symptomatology, (b) teachers' ratings of interpersonal rejection and self-reported child depressive symptomatology, (c) teachers' ratings of interpersonal attractiveness and academic achievement motivation, and (d) teachers' ratings of interpersonal rejection and academic achievements motivation (see Table 19).

The resultant comparisons indicated that only one of the pairs of synchronous correlations differed significantly. The synchronous pair that differed significantly was the correlation between teachers' ratings of interpersonal attractiveness and academic achievement motivation. Thus, perfect stationarity in the data was not achieved. This means that the strength in the relationship between interpersonal

attractiveness and academic achievement motivation differed significantly in strength from Time 1 to Time 2.

Table 19

Synchronous Correlations between Self-Reported Child  
Depressive Symptomatology, Teachers' Ratings of  
Interpersonal Attractiveness, Teachers' Ratings of  
Interpersonal Rejection, and Academic  
Achievement Motivation

	Synchronous Correlations		
	$r_{A_1D_1}$	$r_{A_2D_2}$	$z$
<u>CDI</u>	0.28	0.44	1.3
TRIA	0.31	0.07	1.63
TRPR			
<u>TRAAM</u>			
TRIA	-0.6	0.27	-4.8*
TRPR	-0.3	0.08	-1.1

Note. CDI = Children's Depression Inventory; TRIA = Teacher Ratings of Interpersonal Attractiveness; TRPR = Teacher Ratings of Interpersonal Rejection; TRAAM = Teacher Ratings of Academic Achievement Motivation.

\* $p < .05$ .

### Cross-Lagged Correlation Comparisons

Although this is an exploratory approach, all three of the assumptions must be met before conducting the cross-lagged correlation comparisons. Three of the four variables did not meet all three of the assumptions. Therefore, cross-lagged panel correlation comparisons examining temporal dominance was abandoned.

### Exploratory Analyses

Additional analyses (i.e., correlations) were conducted to investigate the relationship between parent ratings of child behaviors (i.e., externalizing, internalizing) and teacher ratings of negative social responding (i.e., interpersonal attractiveness, interpersonal rejection). The exploratory analyses were calculated using several subscales of the CBCL (i.e., aggression, anxiety/depression, delinquent, withdrawn). The exploratory question investigated whether higher levels of parent-rated child behaviors (i.e., externalizing, internalizing) were associated with higher levels of negative social responding. The second exploratory question investigated whether higher levels of parent-reported child depression would be associated with higher levels of self-reported child depressive symptomatology. As the study was designed to be a longitudinal study consisting of two assessment sessions, the exploratory correlations were run at Time 1 and Time 2. Results of these correlations are presented in Tables 20 and 21.



Table 20

Correlations Among Self-Reported Child Depressive Symptomatology,Teachers' Ratings of Interpersonal Attractiveness, Teachers' Ratingsof Interpersonal Rejection, Academic Achievement Motivation,and Parent Ratings of Child Externalizing and InternalizingBehaviors at Time 1 (N = 51)

	CBCL (A/D)	CBCL (W)	CBCL (Agg)	CBCL (Del.)	CDI	TRIA <sup>a</sup>	TRPR <sup>b</sup>	TRAAM
CBCL (A/D)	1.00	.66**	.65**	.44**	-.06	.23	.14	-.19
CBCL (W)		1.00	.36*	.35*	.13	.08	-.04	.01
CBCL (Agg)			1.00	.73**	-.02	.36**	-.33*	-.32*
CBCL (Del.)				1.00	.13	-.41**	.23	-.30*
CDI					1.00	.28*	.31*	-.30*
TRIA						1.00	.35**	-.60**
TRPR							1.00	-.29*
TRAAM								1.00

Note. CBCL (A/D) = Child Behavior Checklist, Depression Scale; CBCL (W) = Child Behavior Checklist, Withdrawn Scale; CBCL (Agg) = Child Behavior Checklist, Aggression Scale; CBCL (Del.) = Child Behavior Checklist, Delinquent Behavior Scale; CDI = Children's Depression Inventory; TRIA = Teacher Ratings of Interpersonal Attractiveness; TRPR = Teacher Ratings of Interpersonal Rejection; TRAAM = Teacher Ratings of Academic Achievement Motivation.

<sup>a</sup>Higher scores on the TRIA indicate less interpersonal attractiveness. <sup>b</sup>Higher scores on the TRPR indicate greater interpersonal rejection.

\* $p < .05$  \*\* $p < .01$ .

Table 21

Correlations Among Self-Reported Child Depressive Symptomatology, Teachers' Ratings of Interpersonal Attractiveness, Teachers' Ratings of Interpersonal Rejection, Academic Achievement Motivation, and Parent Ratings of Child Externalizing and Internalizing Behaviors at Time 2 (N = 36)

	CBCL (A/D)	CBCL (W)	CBCL (Agg)	CBCL (Del.)	CDI	TRIA <sup>a</sup>	TRPR <sup>b</sup>	TRAAM
CBCL (A/D)	1.00	.67**	.70**	.63**	.06	.05	-.11	.17
CBCL (W)		1.00	.39*	.58**	.11	-.03	.02	.08
CBCL (Agg)			1.00	.87**	.01	.26	.21	.16
CBCL (Del.)				1.00	.05	.33*	.23	.21
CDI					1.00	.44**	.07	.23
TRIA						1.00	.42**	.27*
TRPR							1.00	-.08
TRAAM								1.00

Note. CBCL (A/D) = Child Behavior Checklist, Depression Scale; CBCL (W) = Child Behavior Checklist, Withdrawn Scale; CBCL (Agg) = Child Behavior Checklist, Aggression Scale; CBCL (Del.) = Child Behavior Checklist, Delinquent Behavior Scale; CDI = Children's Depression Inventory; TRIA = Teacher Ratings of Interpersonal Attractiveness; TRPR = Teacher Ratings of Interpersonal Rejection; TRAAM = Teacher Ratings of Academic Achievement Motivation.

<sup>a</sup>Higher scores on the TRIA indicate less interpersonal attractiveness. <sup>b</sup>Higher scores on the TRPR indicate greater interpersonal rejection.

\*p < .05 \*\*p < .01.

### Exploratory Question 1 Results at Time 1

Social Responding – Results of the correlational analyses indicated that teachers' ratings of interpersonal attractiveness were significantly correlated with two subscales on the CBCL (see Table 20). Teachers' ratings of interpersonal attractiveness were significantly correlated with parent ratings of aggressive behavior ( $r = .36, p < .01$ ) and delinquent behavior ( $r = .41, p < .01$ ), indicating that higher levels of aggressive and delinquent behaviors were associated with less attractiveness. Aggressive behaviors were also significantly correlated with teachers' ratings of interpersonal rejection ( $r = .33, p < .05$ ). These results indicate that higher parent ratings of aggressive behaviors were associated with greater rejection.

### Exploratory Question 1 Results at Time 2

Social Responding – Consistent with results at Time 1, teachers' ratings of interpersonal attractiveness were significantly correlated with parent ratings of delinquent behaviors ( $r = .33, p < .05$ ), indicating that higher ratings of delinquent behaviors were associated with less interpersonal attractiveness. Inconsistent with Time 1 results, teachers' ratings of interpersonal attractiveness and interpersonal rejection were not found to be significantly correlated with parent ratings of aggressive behaviors.

### Exploratory Question 2 Results at Time 1 and Time 2

No significant correlational results were found for the second exploratory question, which investigated whether parent-reported child depression was associated with self-reported child depressive symptomatology. Parent-reported ratings of child

depression were not found to be significantly correlated with self-reported child depressive symptomatology at Time 1 or Time 2.

## CHAPTER V

### DISCUSSION

The primary purpose of this study was to discern whether specific types of behaviors exhibited by children in the school environment elicit negative social responding on the part of the teacher. Previous studies that have examined the interpersonal aspects of child depression in the school environment have demonstrated that adults characteristically reject depressed children and adolescents, and that this rejection fosters a depressogenic environment that serves to enforce negative self-views (e.g., Mullins et al., 1995; Pace et al., 1999). Expanding on this research, the current study postulated that self-reported child depressive symptomatology and academic achievement motivation are two specific behavioral patterns within the school environment that serve to elicit negative social responding, thereby maintaining depression. Specifically, it was hypothesized that higher levels of self-reported child depressive symptomatology and deficits in academic achievement motivation would elicit negative social responding from the child's teacher(s). Additionally, it was hypothesized that the relationship between self-reported child depressive symptomatology and negative social responding and academic achievement motivation and negative social responding would be stronger at Time 2 than at Time 1. Two exploratory questions were also examined in the current study. The first exploratory question investigated the

relationship between parent ratings of child behaviors (i.e., externalizing, internalizing) and teacher ratings of interpersonal attractiveness and interpersonal rejection. The second exploratory question investigated whether higher levels of parent-reported child depressive symptomatology would be associated with higher levels of self-reported child depressive symptomatology. Consistent with predictions, self-reported child depressive symptomatology was a significant predictor of teachers' ratings of interpersonal attractiveness at both time points. More specifically, higher levels of self-reported child depressive symptomatology were associated with lower levels of interpersonal attractiveness after controlling for demographic variables (i.e., age, family income, gender, grade). Such results lend partial support to Coyne's interpersonal theory of depression, and are consistent with previous research on interpersonal attractiveness and self-reported child depressive symptomatology (Pace et al., 1999). Further, these findings may reflect the perception(s) that the depressed child is unattractive (Mullins et al., 1986); less popular than their peers (Connolly, 1992); and less likable (Peterson et al., 1985).

Also consistent with predictions, higher levels of self-reported child depressive symptomatology were significantly associated with higher levels of interpersonal rejection, but only at Time 1. These findings were consistent with those of researchers using populations of children (e.g., Mullins et al., 1995); depressed adolescents (e.g., Connolly et al., 1992; Sacco & McLeod, 1990); male psychiatric inpatients (e.g., Joiner, 1999; Joiner & Barnett, 1994); and rural grade students (Pace, Mullins, Beesley, 1994). These findings also lend partial support to Coyne's interpersonal theory of depression and

suggest that adults (i.e., teachers) may indeed reject a depressed child in the context of social interaction. Although the measure used to assess interpersonal rejection (TRPR) does not assess actual overt behavior, the teachers' reported behaviors on this measure indicated a desire to avoid and not interact with children manifesting higher levels of depressive symptoms.

Notably, level of self-reported child depressive symptomatology was not significantly associated with level of interpersonal rejection at Time 2. This finding was not expected, and does not support past research that has established child depressive symptomatology as a predictor of interpersonal rejection throughout the school year (Mullins et al., 1995; Pace et al., 1999). Based on previous research, it was anticipated that as contact and familiarity with children manifesting depressive symptomatology increased, the level of social rejection would also increase.

Further, this finding occurred even though results of the preliminary analyses (i.e., 2 tailed dependent t-tests) indicated that teacher ratings of interpersonal rejection significantly increased from Time 1 to Time 2. Despite such preliminary findings, the relationship between self-reported child depressive symptomatology and interpersonal rejection was no longer demonstrated. Additionally, exploratory analyses indicated that no externalizing types of behavioral problems (i.e., aggression) were found to be significantly related to personal rejection at Time 2. Although speculative, it may be that the teacher rejection is specific to other unidentified behaviors that are occurring in the school setting. Considering this, future research needs to determine what other types of

behaviors in the school environment may elicit negative social responding over time, and how these patterns might change.

A second reason for these findings may be due in part to the differences in the two measures of rejection. The attraction instrument asks for specific ratings based on behavioral, intellectual, and physical dimensions, while the rejection instrument assesses the attitudes of teachers towards students within the context of common types of interactions in elementary school settings. Based on these differences, the teachers may have felt it was more acceptable to think of the child as less attractive, but believed that it was less socially desirable to indicate a willingness to actively avoid and not interact with the child simply because he/she was depressed. Additionally, it may be that over time and with increased familiarity with the child, the teachers may have actively become more accepting and less rejecting of the child's depressive symptomatology. If the teachers were able to look beyond the negative behaviors (i.e., depressive symptomatology) and see the child more positively as the school year progressed, then these results refute one of the basic tenets of Coyne's interpersonal theory of depression. Specifically, Coyne postulated that with increased social interaction, the interactional partners (i.e., peers, colleagues) of depressed individuals tended to view the depressed individual in a more negative, rejecting manner, thus, forming a cycle that serves to maintain the depressive symptomatology. These results suggest that while the teachers initially rejected the children because of the depressive symptomatology, they were able to overcome their initial impressions and prevent the negative interactional cycle from forming. It is further speculated that the teachers may have been able to "look beyond"



the child's depressive symptomatology because they have become better educated about childhood distress/psychopathology, and can temper their own personal views.

It was also predicted that lower levels of academic achievement motivation would be associated with higher levels of negative social responding. Partially consistent with predictions, results indicated that level of academic achievement motivation was associated with level of interpersonal attractiveness and interpersonal rejection, but at Time 1 only. Extant research has suggested that motivational deficits (i.e., diminished academic achievement motivation) are often viewed negatively by others, in that the child is perceived as either having an external motivational style and/or a failure avoidant/amotivation style (Butler, 1994; Wentzel, 1997). Further, when lack of effort is perceived as a cause for achievement problems, it is seen in a more negative light than failure due to a lack of ability. This negative perception may serve to elicit negative social responding by the teacher(s). These negative social responses may then be perceived by the child through the teacher's feedback and behaviors (i.e., negative evaluations, social avoidance of the child).

Although level of academic achievement motivation was found to be a significant predictor of interpersonal attractiveness and interpersonal rejection at Time 1, it was not found to be a predictor at Time 2. At least two possible explanations exist for such findings: (a) the influence of other unmeasured intervening variables, and (b) the reliability of the measure used to assess academic achievement motivation (TRAAM). As it concerns the influence of intervening variables, teachers' negative social responding may have been affected by actual academic achievement (i.e., grades). At Time 2, the

teachers would have had ample opportunities to directly assess the child's actual academic achievement, making it likely that the teachers relied on this specific variable instead of academic achievement motivation in determining how motivated the child was to achieve in their classroom. Therefore, rather than relying on their perceptions (TRAAM) about how motivated a child was in the classroom, they were able to rely on factual data (i.e., grades) about the child's motivation in the classroom.

Secondly, the TRAAM (the measure used to assess academic achievement motivation) did not evidence strong reliability. Although good reliability was established in the standardization of the TRAAM, results of the current study indicated that the TRAAM had both low internal consistency and test-retest reliabilities. Therefore, it is speculated that the TRAAM may not have reliably measured teacher's perceptions of academic achievement motivation from Time 1 to Time 2.

When self-reported child depressive symptomatology and academic achievement motivation were entered simultaneously in a regression analysis as predictor variables at Time 1, both were found to be significantly associated with teachers' ratings of interpersonal attractiveness. Further analysis of these variables revealed that only academic achievement motivation contributed significant unique variance to interpersonal attractiveness, indicating that children who are seen as more academically motivated in the classroom are seen as more attractive. When self-reported child depressive symptomatology and academic achievement motivation were entered simultaneously in a regression analysis at Time 2, both were found to be significantly associated with teachers' ratings of interpersonal attractiveness. However, further analysis of these

variables revealed that only self-reported child depressive symptomatology contributed significant unique variance to interpersonal attractiveness, indicating that children with higher levels of depressive symptomatology are seen as less attractive. These results are inconsistent with the results obtained at Time 1 and suggest that while a teacher's social responses to a child may initially rely on their perceptions of that student's motivation in the classroom, it becomes less important than other behaviors as the school year progresses. For example, the teachers may begin to rely on actual academic achievement (i.e., grades) rather than relying on their perceptions of a student's motivation to achieve academically.

When the criterion variable was interpersonal rejection, results of the analysis indicated that as a block, self-reported depressive symptomatology and academic achievement motivation were significant predictors of interpersonal rejection at Time 1 only. Further examination of these variables revealed that both of them together contributed significant variance, but neither one alone was significant. These results suggest that lower levels of self-reported child depressive symptomatology and higher levels of academic achievement motivation were associated with less rejection. Further, although these behaviors initially elicited teacher rejection during the early part of the school year, they did not elicit social rejection toward the end of the school year. These findings occurred despite the results of the preliminary analyses (i.e., 2 tailed dependent t-tests), which indicated that the teachers' ratings of interpersonal attractiveness and interpersonal rejection both increased from Time 1 to Time 2, while their ratings of academic achievement motivation decreased from Time 1 to Time 2. Although

speculative, it may be that the teachers' negative social responding was elicited by some other unidentified behaviors that were occurring in the school environment. Therefore, future research is warranted in order to determine what other types of behaviors in the school environment may elicit teacher rejection over time and to determine if a wide range of maladaptive behaviors places a child at greater risk for rejection.

Notably, three demographic variables were found to be significantly associated with the negative social responding measures. First, family income was found to be significantly correlated with interpersonal attractiveness at both time points, indicating that children from lower income families were rated as less interpersonally attractive. Results of the regression analysis further indicated that of the demographic variables, only family income contributed significant unique variance to interpersonal attractiveness, and only at Time 1. These findings are largely consistent with extant research that indicates that students from lower income families elicit negative social expectations from their teachers (e.g., Alexander, Entwisle, & Thompson, 1987). Specifically, the students were seen by their teachers as less mature and teachers held lower performance expectations for them. It was speculated that the teachers' own social origins exercised a strong influence on how they reacted to the status attributes of their students (e.g., Alexander et al., 1987).

Second, age and grade were found to be significantly correlated with interpersonal rejection at Time 1 only, indicating that older children in higher grades were initially rejected less. Further, results of the regression analyses indicated that of the demographic variables, only child grade contributed significant unique variance to interpersonal

rejection. These results were found only at Time 1 and suggest that grade may have simply been an artifact of the study. However, as the impact of grade, as well as other demographic variables (i.e., family income) was unexpected in the current study, further research is warranted in order to better understand how these variables may impact teachers' perceptions of students.

Cross-lagged panel correlations were proposed to examine hypotheses 3 and 4, which predicted that the temporal relationships between self-reported child depression and negative social responding and academic achievement motivation and negative social responding would be stronger at Time 2 than at Time 1. However, in order for cross-lagged panel correlations to be appropriately interpreted, three assumptions must be satisfied. These assumptions include: (a) reliability, (b) synchronicity, and (c) stationarity (Kenny, 1975). Three of the four measures did not meet all three of the assumptions and the cross-lag comparisons examining temporal dominance was abandoned. Therefore, the strength of the temporal relationships between self-reported child depression and negative social responding and the relationship between academic achievement motivation and negative social responding could not be established. These results neither refute nor lend support to extant research that indicates a temporal relationship between depression and negative social responding in a child population (i.e., Mullins et al., 1995) and an adult population (i.e., Hokanson, Rupert, Welker, Hollander, & Hedeon, 1989).

Lastly, exploratory analyses were conducted to (a) examine the relationship between parent ratings of child depressive symptomatology and teacher ratings of

interpersonal attractiveness and interpersonal rejection, and (b) the relationship between parent ratings of child depressive symptomatology and self-reported child depression.

The exploratory analyses were run in order to examine the perceptions of another significant figure in the child's life, i.e., the parent.

Results indicated that teachers' ratings of interpersonal attractiveness were significantly correlated with higher levels of aggressive and delinquent behaviors. These findings are consistent with previous research by Mullins et al. (1995), who found significant relationships between parent ratings of both delinquency and thought problems and teachers' social responses. Additionally, aggressive behaviors were found to be significantly correlated with teachers' ratings of interpersonal rejection, indicating that higher parent ratings of aggressive behaviors were associated with greater rejection. Research by Pace et al. (1999) indicates that while children with a wide range of emotional and behavioral problems have an increased risk for poorer relationships with their teacher, children with externalizing problems (i.e., aggression, delinquent behaviors) have a greater risk of experiencing overt personal rejection. Further, extant research has also shown that aggressive behaviors elicit peer rejection as well. In one study, children who displayed fewer task-appropriate and aggressive behaviors were rejected by their peers (Dodge, Coie, & Brakke, 1982). Whereas the rejected child prosocially approached peers as frequently as popular peers, peer responses to the approaches of the rejected child were more likely to be negative. Additionally, research has demonstrated that these rejected children are more likely to encounter future peer group victimization, where behavioral problems (i.e., aggressiveness) and later victimization are mediated by peer

rejection and moderated by the child's dyadic friendships (i.e., Schwartz, D., McFadyen-Ketchum, Dodge, Pettit, & Bates, 1999). Overall, these results indicate that there are other specific types of behaviors within the school environment that may elicit negative social responding on the part of the teacher and the peer. These behaviors include aggression, social difficulties, and disruptive behaviors. However, it is difficult to discern whether both externalizing and internalizing behaviors can elicit the negative social responses, or whether various contributions of these difficulties elicit negative responses.

Although these findings do not establish a causal link between externalizing behaviors and negative social responding, they do suggest that Coyne's interpersonal theory of depression is limited. The theory fails to be comprehensive enough to include other types of behaviors (i.e., aggressiveness) that may elicit negative social responding, as well as to examine how these behaviors may directly influence the interactions between the depressed child and his or her teacher(s). For example, some teachers may only respond to depressed children that also exhibit annoying aggressive behaviors.

Results also indicated that higher levels of parent-reported child depressive symptomatology were not significantly correlated with higher levels of self-reported child depressive symptomatology. This finding is consistent with previous research studies by Mullins et al. (1995) who did not find a significant relationship between parent ratings of child depressive symptomatology and self-reported child depressive symptomatology. Further, these results lend support to research that has demonstrated limited consistency across raters (i.e., children, parents) on self-report measures of childhood depression

(Clarizio, 1994). For example, children's self-report of depression on the CDI and CDS (Children's Depression Scale) only showed a modest relationship with parent ratings of children's depression (e.g., Moretti, Fine, Hales, & Marriage, 1985). In general, there is a reliable, but low agreement ( $r = .25$ ) for parent and child assessments of problematic behavior, where children generally see their impairment as less severe than their parents see it (e.g., Achenbach, McConaughy, & Howell, 1987).

Overall, the current research study advanced our research in a number of ways. First, a strength of this research study was the use of discrete child and teacher assessment measures (i.e., CDI, TRIA, TRPT, TRAAM) in addition to more global assessment measures (e.g., Child Behavior Checklist). One of the major problems with global assessment measures is determining whether they are evaluating the construct they were designed to measure (Kazdin, 1992). Global assessment measures by definition are general, and numerous variables may enter into the rater's criteria for evaluating the individual. In addition, because the criteria are not well specified, it is possible that the ratings on these global measures may change over time, independently of whether or not the individual has changed. Thus, changes in the measurement criteria over time may threaten the internal validity of study.

Second, in selecting the research hypotheses, the investigator used a theory-driven model to make predictions about the relationship(s) between self-reported child depression, negative social responding, and academic achievement motivation. Specifically, Coyne's interpersonal theory of depression was used in order to: (a) predict and explain how relationships between self-reported child depression, negative social



responding, and academic achievement motivation develop and are maintained, and (b) to determine what implications these relationships may have for understanding child depression.

Another strength of the current study was that it was based on a longitudinal design, which allowed the researcher to make comparisons of self-reported child depressive symptomatology, negative social responding, and academic achievement motivation over an extended period (one year) of time. A longitudinal design was also important when considering the theory upon which the current study was based on. Although Coyne theorized about the interpersonal relations between the depressed individual and their interactional partners, he also theorized about the how the relationship developed with increased social interaction between the depressed individual and their interactional partner(s). In addition, the longitudinal design allowed for the history of the participants to be controlled, since the same group of students was followed over the course of a school year.

A third strength of the study was the inclusion of a measure of academic achievement motivation. Although the study was based on Coyne's interpersonal theory of depression, which identifies depressive symptomatology as the salient behavior that elicits negative social responding, another dimension of child behavior (i.e., academic achievement motivation) that may elicit negative social responding was also examined. Specifically, the purpose of the study was to expound on Coyne's theory and to determine what behaviors in addition to depressive symptomatology can elicit negative social responding in the school environment.

In addition to these strengths, the current research study did have particular limitations. First, there may be a threat to the internal validity of the study because there was not a random assignment of participants. Instead of random assignment, participants were recruited from intact groups (i.e., classes, schools) and self-selected. Secondly, the sample size was relatively small. Therefore, it is not known how well these results can be generalized beyond this study. It is speculated that an increase in sample size would serve to minimize the threats to external validity.

Additionally, the generalizability of the study is also limited in terms of the child population sampled. The data collected on child depressive symptomatology was from children in a community sample, rather than a clinical population of children diagnosed with depression. Indeed, the scores on the CDI suggested that the current sample could best be characterized as a nondepressed group of students with very little variability in the severity of their depressive symptomatology. Different results may well have been obtained using a sample from a clinical population. Therefore, the relevance of these findings to clinically depressed children remains unclear.

A third limitation of the current study was the sole reliance on one self-report measure of child depressive symptomatology. The current study could have benefited from the use of child and parent clinical interviews (i.e., Childhood Assessment Schedule; Hodges, 1981 ) which would have allowed for a better understanding of the child's presenting complaints or problems, mental state, life circumstances, and psychosocial or developmental history.

Additionally, the study was limited because it did not consider the impact of other possible intervening variables on negative social responding. For example, although the study examined the teachers' perceptions of academic achievement motivation, it did not examine the effect (s) of actual academic achievement (i.e., grades). Finally, the current study did not elaborate on whether teachers actually demonstrate rejecting behaviors and whether the children perceive these behaviors in kind.

In conclusion, the current findings of this study suggest that there are specific types of behaviors within the school environment that elicit negative social responding on the part of the teacher. Specifically, the results suggest that self-reported child depressive symptomatology and deficits in academic achievement motivation are specific types of behaviors that contribute to this negative social responding. Additionally, the findings also suggest that externalizing behaviors (i.e., aggression) elicited negative social responding as well. The results of the study also may bear on Swann's (1983) self-verification theory, which theorizes that people preserve their self-concepts by seeking and actively soliciting self-confirming interpersonal responses from those in their social environments. Although it is not known whether or not the children in this study volitionally behaved in ways that elicited negative social responding, the results do suggest that the children behaved in ways that elicited increased negative social responding. To address this issue, research is needed that will help to determine whether children intentionally exhibit behaviors that will solicit self-confirming interpersonal responses from those in their social environments, thereby maintaining their negative self-views. Further, future research needs to determine what behaviors or combination of

behaviors are responsible for eliciting negative social responding in the school environment. To do this, research utilizing a contrast group of children with other diagnoses (i.e., attention deficit disorder, oppositional defiant disorder) will help in examining the interrelationships among these variables. Research also needs to determine what other specific types of internalizing (i.e., anxiety) behaviors may be responsible for eliciting negative social responding on the part of the teacher.

Once it is determined what specific types of behaviors are involved in eliciting this negative social responding, then school-based programs need to be designed and implemented in order to address the problems. Specifically, school-based programs could focus on increasing the knowledge and awareness of teachers and school administrators about the various childhood disorders (i.e., depression, attention deficit hyperactivity disorder). In learning about the various childhood disorders, teachers would better understand the etiology, signs and symptoms, and treatment considerations for each disorder. This increased knowledge would allow them to more readily identify children with emotional and behavioral problems much earlier in the course of the disorder. Teachers would then be able to recommend appropriate services through the school setting that would both alleviate the child's current symptoms while preventing the emotional and behavioral problems from escalating in severity. The nature of negative social responding could also be addressed in an effort to "inoculate" the teachers in a sense. This would help teachers to better understand the interpersonal dynamics between children with emotional and behavioral problems and their teachers. This would ultimately prevent Coyne's hypothesized cycle between the depressed child and his/her

teacher from ever developing. As the results of this study and extant literature suggest, certain behaviors exhibited by the child in the school environment do indeed elicit negative social responding on the part of the teacher, which may then lead to poor interpersonal relations. Therefore, it is important that every effort is made to ensure that these behaviors are identified and resolved before any negative consequences develop.

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## APPENDIXES

APPENDIX A

INSTITUTIONAL REVIEW BOARD

APPROVAL FORM

OKLAHOMA STATE UNIVERSITY  
INSTITUTIONAL REVIEW BOARD

Date: April 7, 2000 IRB #: AS-00-119  
Proposal Title: "PERCEPTIONS OF CHILDREN'S BEHAVIOR"  
Principal Investigator(s): Larry Mullins  
Colleen Ewing  
Reviewed and Processed as: Expedited (special population)  
Approval Status Recommended by Reviewer(s): Approved

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Signature:

*Carol Olson*

Carol Olson, Director of University Research Compliance

April 7, 2000

Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

APPENDIX B

RECRUITMENT LETTER (TEACHER)

## OKLAHOMA STATE UNIVERSITY



College of Arts and Sciences  
 Department of Psychology  
 215 North Murray  
 Stillwater, Oklahoma 74078-3064  
 405-744-6027

Date

Dear Teacher:

As a professional who works on a daily basis with young children, I am sure that you are well aware of how important it is for children to have friends. A child's social growth and self-esteem are often improved with the ability to develop positive relationships with other children and important adults in their lives such as parents and teachers. However, how well children are able to develop and foster these friendships varies considerably. The goal of this study is to learn more about how children view, develop, and foster relationships with others, and how others respond to children in turn. The principal and other school personnel have reviewed the study, were interested in its relevance to the students and thus, gave us permission to proceed with it in your school. We hope that you would share the same enthusiasm.

As proposed, the bulk of the work for the children who consent to participate will be done in a central location in the school during school hours. These students will fill out questionnaires that ask them some questions about how they see themselves, as well as, other children in the classroom (e.g., who they like to play with, most popular). The children will be asked to write down their responses without discussing them with other students. Filling out the questionnaires should take approximately 30 - 45 minutes of class time. There will be graduate and undergraduate students on site to distribute and collect the questionnaire materials. Children who do not participate will remain in your classroom.

The day the students fill out their questionnaires, we will give you a set of very brief questionnaires. The questionnaires, we would like you to complete, ask you to answer questions regarding your opinion of how you perceive the child in the classroom. The questionnaires should take a few minutes at most for each child. We would ask that you return these questionnaires to your principal by \_\_. This will give you two weeks to fill out the material. We realize your time is precious, and that is why we are allowing a sufficient amount of time. The information you provide in the questionnaire will be confidential (that is, the information will not be made known to your students, their parents, school administrators, etc.). Any reports written about the study will not identify individual children or teachers. There is no risk posed to you by participating in this study.





There are two possible benefits of this study. First, it will give us a better understanding of children's friendships and relationships to important adults in their lives. We anticipate that this knowledge will be useful to parents, teachers, and others who are in a position to help children who are having problems with friendships. Secondly, we will offer a workshop/presentation to you, other teachers, students, and administrators of the school concerning this line of research.

To participate, please sign the attached form and return it to your principal by \_\_. If this study is to be beneficial, it is really important that as many teachers as possible participate. We hope that you share our enthusiasm about the study and want to participate. A consent form is attached. If you have any questions, please contact me at (405) 744-6027.

Sincerely,

Larry L. Mullins, Ph.D.  
Associate Professor  
Oklahoma State University

APPENDIX C

INFORMED CONSENT FORM (TEACHER)

## OKLAHOMA STATE UNIVERSITY



College of Arts and Sciences  
 Department of Psychology  
 215 North Murray  
 Stillwater, Oklahoma 74078-3064  
 405-744-6027

### Teacher Consent Form for Research Participation

I \_\_\_\_\_ have freely consented to participate in the study conducted by Larry L. Mullins, Ph.D. about children's peer friendships and relationships to important adults in their lives (e.g., parents, teachers). The study has been explained to me, I understand the explanation that has been given, and give my informed consent to participate. I understand that I will be asked to fill out questionnaires about my opinion on how I perceive each participating child in the classroom.

I understand that I can discontinue my participation in the study at any time without penalty. I am also aware that my involvement or lack of involvement in the study will not penalize me.

I understand that the results of the study will be confidential ( that the information will not be made known to students, parents, teachers, administrators, etc.) and I will remain anonymous. I understand that the general results of the research may be published in professional journals and/or presented at professional meetings.

I understand that participation in the study does not guarantee any beneficial results to me or the students in my classroom. If I have any questions or concerns, I may contact Larry L. Mullins, Ph.D. at (405) 744-6027.

Signed:

\_\_\_\_\_  
 Signature of Teacher

\_\_\_\_\_  
 Date

The Campaign for OSU



APPENDIX D

RECRUITMENT LETTER (PARENT)

## OKLAHOMA STATE UNIVERSITY



College of Arts and Sciences  
 Department of Psychology  
 215 North Murray  
 Stillwater, Oklahoma 74078-3064  
 405-744-6027

Date

Dear Parent:

Our school has agreed to participate in a research project conducted by Dr. Larry L. Mullins at Oklahoma State University. The research project is designed to help understand how children's behavior becomes problematic. As you are probably aware, adjustment problems in children are becoming a growing concern for educators, health professionals, and parents. On a voluntary basis, you and your children are being asked to participate so that we can help increase the understanding of problematic behaviors in childhood.

For students who return the consent form, a raffle will be held for a \$15.00 Hastings gift certificate. Students who actually participate in the study will receive either baseball or superhero cards. For parents who fill out and return their questionnaires, a raffle will be held for a \$25.00 Walmart gift certificate.

Two consent forms are attached to this letter that explains the project. Should you and your child wish to participate, please sign one of the consent forms and return the signed form with your child to give to his/her teacher within one week. The other consent form is for your records.

For your consideration, I would like to emphasize the following:

1. This project has been reviewed and approved by the Institutional Review Board at Oklahoma State University.
2. The school's administrator has consented to participate in this project.
3. The investigators for this project are university faculty, licensed psychologists, and experts on childhood behavior problems.
4. This project has been planned to minimize disruption to your child's educational time. Only about 30-45 minutes of class time will be required of your child on two occasions, once in the Fall and once in the Spring.
5. This project will require only about 45 minutes of one parent's time on two occasions.
6. This project will require only about one-half hour of your child's teacher's time on two occasions.
7. All parents and teachers who desire will receive a written copy of the results of this research after it is completed.
8. All answers will remain confidential; names will be removed and code numbers used. No individuals or schools will be identified in any reports, nor will the results of individual answers be discussed with your child's teachers.

Thank you for your time.

Sincerely,

\_\_\_\_\_  
 Principal

\_\_\_\_\_  
 Larry L. Mullins, Ph.D.  
 Associate Professor  
 Oklahoma State University



APPENDIX E

INFORMED CONSENT (PARENT)

**Oklahoma State University  
Informed Consent Form**

**Title of Project: Perceptions of Children's Behavior**

**Investigator (s):** Larry L. Mullins, Ph.D., Associate Professor, Department of Psychology, Oklahoma State University, (405) 744-6027.

**Permission for Child to Participate:** This is to certify that I, \_\_\_\_\_, hereby give permission to have my child participate as a volunteer in a study of perceptions of children's behavior, under the supervision of Dr. Larry L. Mullins, as part of a research project that has been approved by the appropriate overseeing board of Oklahoma State University.

**Consent for Parental Participation:** This is to certify that I, \_\_\_\_\_, agree to participate as a volunteer in a study of perceptions of children's behavior, under the supervision of Dr. Larry L. Mullins, as part of a research project that has been approved by the appropriate overseeing board of Oklahoma State University.

**Description of the Study:** Through arrangements with your child's school, the researchers will visit the school and have your child fill out a number of questionnaires. Along with all participating children, your child will be excused from class for about 30-45 minutes. All children will be assembled in a central location, where the administrators will administer the questionnaires. One parent (mother or father) will be asked to fill out two questionnaires at home. One questionnaire covers background information; and one is a series of questions about your child's overall adjustment. These two questionnaires should take a total of about 45 minutes to complete and are to be returned with your child to school sealed in the envelope provided. Your child's teacher will be asked to answer a few questions about his/her feelings regarding your child's social adjustment. The researchers will protect all information.

In three to six months, but prior to the end of the school year, you, your child, and your child's teacher will be asked to again complete each of these questionnaires.

**Purpose of the Intended Study:** The purpose of this study, is designed to assess both teacher and student perceptions of children's behavior in the classroom context. More specifically, we are assessing how teachers and students perceive the behaviors of others during the day-to-day classroom routine, including behaviors that are considered to be potentially problematic (e.g., withdrawal, sadness, being off task, daydreaming, interrupting). In this manner, we can also ascertain the personal reactions and responses of the participating children.

**Risks of Participation:** I understand that all the questionnaires used in this study have been used in previous research and are considered safe and appropriate for the purposes they are being used for and that completion of these questionnaires is not expected to pose any discomfort to participants. It is possible that your child might answer questions in a way that would suggest a risk for adjustment problems. If any child gives such a response, the researchers will notify the parents and will let them know of any concerns of a serious nature. Information will be provided to any interested parents on resources for evaluation and treatment for such concerns.

**Benefits of Participation:** I understand that there are no direct personal benefits that I or my child will receive for participation in this study. The only benefits are in being able to contribute to the research trying to better understand perceptions of children's behavior. This may, of course, be seen as a potential benefit to society at large. Regardless of my decision to participate or not participate in this study, I understand that I will be invited to attend a workshop on childhood behavior problems to be scheduled during the next school year. This workshop will be conducted by the researchers, who are experts on childhood problems, and focused on the interests of parents and teachers.

**Subject Assurances:**

**Conditions of Participation:** I understand that participation is voluntary and that refusal to participate or withdrawal from participation at any time will in no way affect me or my child. In particular, I understand that participation will in no way affect my child's education. I understand that I or my child may discontinue participation at any time without penalty or consequence.

**Confidentiality:** I understand that all information collected from me, my child, and my child's teacher will remain strictly confidential and will only be seen by the investigators. I understand that all names will be removed from the questionnaires and code numbers will be assigned to each participant. I understand that all information will be stored at Oklahoma State University in the office of the principal investigator, Dr. Larry L. Mullins. I understand that no individual will be identified in any public report of this research. I also understand that at no time will information on individuals be shared with the school and that schools will also not be identified in any public report of the research.

**Legal Rights:** I understand that by agreeing to participate in this research and signing this form I do not waive any of my legal rights.

**Contacts for Questions:** I understand that if I have any questions about this research or need to report any adverse effects from the research, I may contact Dr. Larry L. Mullins at Oklahoma State University, 215 N. Murray Hall, Stillwater, OK 74078. I may call Dr. Mullins at (405) 744-6027.



**Signatures:**

\_\_\_\_\_  
Signature of the Parent/Guardian

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of the Teacher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of the Principal Investigator

\_\_\_\_\_  
Date

APPENDIX F

ASSENT FORM (CHILD)

## OKLAHOMA STATE UNIVERSITY



College of Arts and Sciences  
Department of Psychology  
215 North Murray  
Stillwater, Oklahoma 74078-3064  
405-744-6027

OKLAHOMA STATE UNIVERSITY  
ASSENT FORM FOR CHILDREN  
TITLE OF PROJECT: PERCEPTIONS OF CHILDREN'S BEHAVIOR

1. This is a project on the feelings and behavior of children.
2. If you want to be in this project, you will have to fill out a paper that asks you questions about your moods and feelings.
3. No one will know your answers except Dr. Mullins.
4. Your parents and teachers will also be sent some papers to answer questions about your moods and feelings.
5. Your parents have already signed a form saying it is okay with them for you to be in this project if you want to.
6. If you agree to participate in this project, just sign your name on the line below.

\_\_\_\_\_

Name

\_\_\_\_\_

Date



APPENDIX G

CHILDREN'S DEPRESSION INVENTORY

## Feelings Questionnaire

(CDI)

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 answer or wrong answer. Just pick the sentence that best describes the way you have been recently. Put a mark like this X next to your answer. Put the mark in the box 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.

Example:

- 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 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 once 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
8. \_\_\_\_\_ All bad things are my fault  
\_\_\_\_\_ Many bad things are my fault  
\_\_\_\_\_ Bad things are not usually my fault
9. \_\_\_\_\_ I feel like crying every day  
\_\_\_\_\_ I feel like crying many days  
\_\_\_\_\_ I feel like crying once in a while
10. \_\_\_\_\_ Things bother me all the time  
\_\_\_\_\_ Things bother me many times  
\_\_\_\_\_ Things bother me once in a while
11. \_\_\_\_\_ I like being with people  
\_\_\_\_\_ I do not like being with people many times  
\_\_\_\_\_ I do not want to be with people at all
12. \_\_\_\_\_ 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

Remember, Describe how you have been in the past two weeks.

13. \_\_\_\_\_ I look O.K.  
\_\_\_\_\_ There are some bad things about my looks  
\_\_\_\_\_ I look ugly
14. \_\_\_\_\_ I have to push myself all the time to do my school work  
\_\_\_\_\_ I have to push myself many times to do my school work  
\_\_\_\_\_ Doing school work is not a big problem
15. \_\_\_\_\_ I have trouble sleeping every night  
\_\_\_\_\_ I have trouble sleeping many nights  
\_\_\_\_\_ I sleep pretty well
16. \_\_\_\_\_ I am tired once in a while  
\_\_\_\_\_ I am tired many days  
\_\_\_\_\_ I am tired all the time
17. \_\_\_\_\_ Most days I do not feel like eating  
\_\_\_\_\_ Many days I do not feel like eating  
\_\_\_\_\_ I eat pretty well
18. \_\_\_\_\_ 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



19. \_\_\_\_\_ I do not feel alone  
\_\_\_\_\_ I feel alone many times  
\_\_\_\_\_ I feel alone all the time
20. \_\_\_\_\_ I never have fun at school  
\_\_\_\_\_ I have fun at school only once in a while  
\_\_\_\_\_ I have fun at school many times
21. \_\_\_\_\_ I have plenty of friends  
\_\_\_\_\_ I have some friends but I wish I had more  
\_\_\_\_\_ I do not have any friends
22. \_\_\_\_\_ 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
23. \_\_\_\_\_ 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
24. \_\_\_\_\_ Nobody really loves me  
\_\_\_\_\_ I am not sure if anybody loves me  
\_\_\_\_\_ I am sure that somebody loves me

25. \_\_\_\_\_ I usually do what I am told  
\_\_\_\_\_ I do not do what I am told most times  
\_\_\_\_\_ I never do what I am told
26. \_\_\_\_\_ I get along with people  
\_\_\_\_\_ I get into fights many times  
\_\_\_\_\_ I get into fights all the time

THE END

Thank you for filling out this form

APPENDIX H

BACKGROUND INFORMATION

### BACKGROUND INFORMATION

Remember, all information will have names removed and replaced with a code number so that complete confidentiality will be maintained. Please answer as accurately and honestly as possible. Thank you.

Parent's Name \_\_\_\_\_ Parent's Age \_\_\_\_\_

Parent's Relationship to Child (check one):

- Mother       Father       Stepmother       Stepfather  
 Other (please specify) \_\_\_\_\_

Child's Name \_\_\_\_\_ Check One:  Male  Female

Child's Date of Birth \_\_\_\_\_ Child's Age \_\_\_\_\_

Phone Number (home) \_\_\_\_\_ (work) \_\_\_\_\_

Parent's Marital Status (check one):

- Single       Married       Divorced       Separated       Widowed

Number of Children in Your Home (including this child) \_\_\_\_\_

Parent's Education (check one):

- Did Not Complete High School       High School Graduate  
 Attended College but Did Not Graduate       College Degree  
 Master's Degree       Doctoral Degree

Mother's Occupation (list) \_\_\_\_\_

Father's Occupation (list) \_\_\_\_\_

Family Income During Last Year (check one):

- \$0-\$10,000       \$11,000-\$20,000       \$21,000-\$30,000  
 \$31,000-\$50,000       \$51,000-\$100,000       \$100,000+

Does your child have any kind of chronic illness or disability (check one)?

- Yes       No

If yes, what illness or disability does he/she have? \_\_\_\_\_

\_\_\_\_\_

**(Background Information, Page 2)**  
**(Please continue.)**

Does any member of the child's immediate family (including yourself) have any kind of chronic illness or disability (check one)?

Yes       No

If yes, what illness or disability does he/she have? \_\_\_\_\_

What relationship is this person to the child (please specify)? \_\_\_\_\_

Has your child ever received psychological treatment such as counseling or medication for an emotional or behavioral problem (check one)?

Yes       No

If yes, what age was your child at the time of treatment? \_\_\_\_\_

Is your child in treatment at this time (check one)?     Yes     No

What are/were the reasons for your child's treatment (check all that apply)?

Depression       Anxiety       Behavior Problems       Learning Problems

Attention or Hyperactivity Problems       Problems with Peers

Family Conflicts       Substance Abuse

Other Problems (please specify) \_\_\_\_\_

Has any member of your child's immediate family (including yourself) ever received psychological treatment such as counseling or medication for emotional or behavioral problems (circle one)?

Yes       No

Is this person in treatment at this time (circle one)?     Yes     No

**Background Information, Page 3**  
(Please continue.)

What are/were the reasons for this person's treatment (check all that apply)?

- Depression       Anxiety       Behavior Problems       Learning Problems
- Attention or Hyperactivity Problems       Problems with Peers
- Family Conflicts       Substance Abuse
- Other Problems (please specify) \_\_\_\_\_
- \_\_\_\_\_

What relationship is this person to the child (please specify)? \_\_\_\_\_

**THANK YOU!**

APPENDIX I

CHILD BEHAVIOR CHECKLIST

**CHILD BEHAVIOR CHECKLIST FOR AGES 4-18**

For office use only  
ID # \_\_\_\_\_

*Please Print*

CHILD'S FULL NAME	FIRST _____	MIDDLE _____	LAST _____	PARENTS' USUAL TYPE OF WORK, even if not working now. <i>(Please be specific—for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.)</i>  FATHER'S TYPE OF WORK: _____  MOTHER'S TYPE OF WORK: _____
SEX	AGE _____		ETHNIC GROUP OR RACE _____	
TODAY'S DATE		CHILD'S BIRTHDATE		THIS FORM FILLED OUT BY: <input type="checkbox"/> Mother (full name) _____ <input type="checkbox"/> Father (full name) _____ <input type="checkbox"/> Other—name & relationship to child: _____
Mo. _____ Date _____ Yr. _____		Mo. _____ Date _____ Yr. _____		
GRADE IN SCHOOL	Please fill out this form to reflect your view of the child's behavior even if other people might not agree. Feel free to print additional comments beside each item and in the spaces provided on page 2.			
NOT ATTENDING SCHOOL <input type="checkbox"/>				

**I. Please list the sports your child most likes to take part in.** For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

None

	Don't Know	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average
a. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**II. Please list your child's favorite hobbies, activities, and games, other than sports.** For example: stamps, dolls, books, piano, crafts, cars, singing, etc. (Do not include listening to radio or TV.)

None

	Don't Know	Less Than Average	Average	More Than Average	Don't Know	Below Average	Average	Above Average
a. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**III. Please list any organizations, clubs, teams, or groups your child belongs to.**

None

	Don't Know	Less Active	Average	More Active
a. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**IV. Please list any jobs or chores your child has.** For example: paper route, babysitting, making bed, working in store, etc. (Include both paid and unpaid jobs and chores.)

None

	Don't Know	Below Average	Average	Above Average
a. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Please Print

- V. 1. About how many close friends does your child have?  None  1  2 or 3  4 or more  
 (Do not include brothers & sisters)
2. About how many times a week does your child do things with any friends outside of regular school hours?  
 (Do not include brothers & sisters)  Less than 1  1 or 2  3 or more

- VI. Compared to others of his/her age, how well does your child:
- |   | Worse                    | About Average            | Better                   |   |
|---|--------------------------|--------------------------|--------------------------|---|
| a. Get along with his/her brothers & sisters? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Has no brothers or sisters |
| b. Get along with other kids?                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
| c. Behave with his/her parents?               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
| d. Play and work alone?                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |

- VII. 1. For ages 6 and older—performance in academic subjects.  Does not attend school because \_\_\_\_\_

Check a box for each subject that child takes

	Falling	Below Average	Average	Above Average
a. Reading, English, or Language Arts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. History or Social Studies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Arithmetic or Math	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other academic subjects—for example: computer courses, foreign language, business. Do not include gym, shop, driver's ed., etc.				
e. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Does your child receive special remedial services or attend a special class or special school?  No  Yes—kind of services, class, or school: \_\_\_\_\_

3. Has your child repeated any grades?  No  Yes—grades and reasons: \_\_\_\_\_

4. Has your child had any academic or other problems in school?  No  Yes—please describe: \_\_\_\_\_

When did these problems start? \_\_\_\_\_

Have these problems ended?  No  Yes—when? \_\_\_\_\_

- Does your child have any illness or disability (either physical or mental)?  No  Yes—please describe: \_\_\_\_\_

What concerns you most about your child? \_\_\_\_\_

Please describe the best things about your child: \_\_\_\_\_

Below is a list of items that describe children and youth. For each item that describes your child *now or within the past 6 months*, please circle the 2 if the item is *very true or often true* of your child. Circle the 1 if the item is *somewhat or sometimes true* of your child. If the item is *not true* of your child, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to your child.

Please Print

0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

- |   |   |   |     |  |   |   |   |     |  |
|---|---|---|-----|--|---|---|---|-----|--|
| 0 | 1 | 2 | 1.  | Acts too young for his/her age   | 0 | 1 | 2 | 31. | Fears he/she might think or do something bad                               |
| 0 | 1 | 2 | 2.  | Allergy (describe): _____  | 0 | 1 | 2 | 32. | Feels he/she has to be perfect   |
|   |   |   |     | _____  | 0 | 1 | 2 | 33. | Feels or complains that no one loves him/her                               |
| 0 | 1 | 2 | 3.  | Argues a lot   | 0 | 1 | 2 | 34. | Feels others are out to get him/her  |
| 0 | 1 | 2 | 4.  | Asthma   | 0 | 1 | 2 | 35. | Feels worthless or inferior  |
| 0 | 1 | 2 | 5.  | Behaves like opposite sex  | 0 | 1 | 2 | 36. | Gets hurt a lot, accident-prone  |
| 0 | 1 | 2 | 6.  | Bowel movements outside toilet   | 0 | 1 | 2 | 37. | Gets in many fights  |
| 0 | 1 | 2 | 7.  | Bragging, boasting   | 0 | 1 | 2 | 38. | Gets teased a lot  |
| 0 | 1 | 2 | 8.  | Can't concentrate, can't pay attention for long  | 0 | 1 | 2 | 39. | Hangs around with others who get in trouble                                |
| 0 | 1 | 2 | 9.  | Can't get his/her mind off certain thoughts; obsessions (describe): _____              | 0 | 1 | 2 | 40. | Hears sounds or voices that aren't there (describe): _____                 |
|   |   |   |     | _____  |   |   |   |     |  |
| 0 | 1 | 2 | 10. | Can't sit still, restless, or hyperactive  | 0 | 1 | 2 | 41. | Impulsive or acts without thinking   |
| 0 | 1 | 2 | 11. | Clings to adults or too dependent  | 0 | 1 | 2 | 42. | Would rather be alone than with others                                     |
| 0 | 1 | 2 | 12. | Complains of loneliness  | 0 | 1 | 2 | 43. | Lying or cheating  |
| 0 | 1 | 2 | 13. | Confused or seems to be in a fog   | 0 | 1 | 2 | 44. | Bites fingernails  |
| 0 | 1 | 2 | 14. | Cries a lot  | 0 | 1 | 2 | 45. | Nervous, highstrung, or tense  |
| 0 | 1 | 2 | 15. | Cruel to animals   | 0 | 1 | 2 | 46. | Nervous movements or twitching (describe): _____                           |
| 0 | 1 | 2 | 16. | Cruelty, bullying, or meanness to others   |   |   |   |     | _____  |
| 0 | 1 | 2 | 17. | Day-dreams or gets lost in his/her thoughts  | 0 | 1 | 2 | 47. | Nightmares   |
| 0 | 1 | 2 | 18. | Deliberately harms self or attempts suicide  | 0 | 1 | 2 | 48. | Not liked by other kids  |
| 0 | 1 | 2 | 19. | Demands a lot of attention   | 0 | 1 | 2 | 49. | Constipated, doesn't move bowels   |
| 0 | 1 | 2 | 20. | Destroys his/her own things  | 0 | 1 | 2 | 50. | Too fearful or anxious   |
| 0 | 1 | 2 | 21. | Destroys things belonging to his/her family or others                                  | 0 | 1 | 2 | 51. | Feels dizzy  |
| 0 | 1 | 2 | 22. | Disobedient at home  | 0 | 1 | 2 | 52. | Feels too guilty   |
| 0 | 1 | 2 | 23. | Disobedient at school  | 0 | 1 | 2 | 53. | Overeating   |
| 0 | 1 | 2 | 24. | Doesn't eat well   | 0 | 1 | 2 | 54. | Overtired  |
| 0 | 1 | 2 | 25. | Doesn't get along with other kids  | 0 | 1 | 2 | 55. | Overweight   |
| 0 | 1 | 2 | 26. | Doesn't seem to feel guilty after misbehaving  |   |   |   | 56. | Physical problems <i>without known medical cause</i> :                     |
| 0 | 1 | 2 | 27. | Easily jealous   | 0 | 1 | 2 | a.  | Aches or pains ( <i>not</i> stomach or headaches)                          |
| 0 | 1 | 2 | 28. | Eats or drinks things that are not food— <i>don't</i> include sweets (describe): _____ | 0 | 1 | 2 | b.  | Headaches  |
|   |   |   |     | _____  | 0 | 1 | 2 | c.  | Nausea, feels sick   |
|   |   |   |     |  | 0 | 1 | 2 | d.  | Problems with eyes ( <i>not</i> if corrected by glasses) (describe): _____ |
| 0 | 1 | 2 | 29. | Fears certain animals, situations, or places, other than school (describe): _____      | 0 | 1 | 2 | e.  | Rashes or other skin problems  |
|   |   |   |     | _____  | 0 | 1 | 2 | f.  | Stomachaches or cramps   |
| 0 | 1 | 2 | 30. | Fears going to school  | 0 | 1 | 2 | g.  | Vomiting, throwing up  |
|   |   |   |     |  | 0 | 1 | 2 | h.  | Other (describe): _____  |

*Please Print*

0 = Not True (as far as you know)    1 = Somewhat or Sometimes True    2 = Very True or Often True

0	1	2	57. Physically attacks people	0	1	2	84. Strange behavior (describe): _____
0	1	2	58. Picks nose, skin, or other parts of body (describe): _____				_____
			_____	0	1	2	85. Strange ideas (describe): _____
			_____				_____
0	1	2	59. Plays with own sex parts in public	0	1	2	86. Stubborn, sullen, or irritable
0	1	2	60. Plays with own sex parts too much	0	1	2	87. Sudden changes in mood or feelings
0	1	2	61. Poor school work	0	1	2	88. Sulks a lot
0	1	2	62. Poorly coordinated or clumsy	0	1	2	89. Suspicious
0	1	2	63. Prefers being with older kids	0	1	2	90. Swearing or obscene language
0	1	2	64. Prefers being with younger kids	0	1	2	91. Talks about killing self
0	1	2	65. Refuses to talk	0	1	2	92. Talks or walks in sleep (describe): _____
0	1	2	66. Repeats certain acts over and over; compulsions (describe): _____				_____
			_____	0	1	2	93. Talks too much
0	1	2	67. Runs away from home	0	1	2	94. Teases a lot
0	1	2	68. Screams a lot	0	1	2	95. Temper tantrums or hot temper
0	1	2	69. Secretive, keeps things to self	0	1	2	96. Thinks about sex too much
0	1	2	70. Sees things that aren't there (describe): _____	0	1	2	97. Threatens people
			_____	0	1	2	98. Thumb-sucking
			_____	0	1	2	99. Too concerned with neatness or cleanliness
0	1	2	71. Self-conscious or easily embarrassed	0	1	2	100. Trouble sleeping (describe): _____
0	1	2	72. Sets fires				_____
0	1	2	73. Sexual problems (describe): _____	0	1	2	101. Truancy, skips school
			_____	0	1	2	102. Underactive, slow moving, or lacks energy
			_____	0	1	2	103. Unhappy, sad, or depressed
0	1	2	74. Showing off or clowning	0	1	2	104. Unusually loud
0	1	2	75. Shy or timid	0	1	2	105. Uses alcohol or drugs for nonmedical purposes (describe): _____
0	1	2	76. Sleeps less than most kids				_____
0	1	2	77. Sleeps more than most kids during day and/or night (describe): _____	0	1	2	106. Vandalism
			_____	0	1	2	107. Wets self during the day
0	1	2	78. Smears or plays with bowel movements	0	1	2	108. Wets the bed
0	1	2	79. Speech problem (describe): _____	0	1	2	109. Whining
			_____	0	1	2	110. Wishes to be of opposite sex
0	1	2	80. Stares blankly	0	1	2	111. Withdrawn, doesn't get involved with others
0	1	2	81. Steals at home	0	1	2	112. Worries
0	1	2	82. Steals outside the home				113. Please write in any problems your child has that were not listed above:
0	1	2	83. Stores up things he/she doesn't need (describe): _____	0	1	2	_____
			_____	0	1	2	_____
			_____	0	1	2	_____

PLEASE BE SURE YOU HAVE ANSWERED ALL ITEMS.

PAGE 4

UNDERLINE ANY YOU ARE CONCERNED ABOUT.

APPENDIX J

TEACHER RATINGS OF ACADEMIC  
ACHIEVEMENT MOTIVATION

**Teacher Rating of Academic Achievement Motivation  
TRAAM-50**  
Copyright 1991 Terry A. Stinnett, Ph.D. and Judy Oehler-Stinnett, Ph.D.  
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Student Name: \_\_\_\_\_ Teacher: \_\_\_\_\_

Date of Birth: \_\_\_\_\_ Date of Rating: \_\_\_\_\_

Sex:  Female  Male

Race:  White  Black  Hispanic  Asian  Native American  Other

Grade:  3rd  4th  5th  6th

School: \_\_\_\_\_

**Directions:** Please read each item carefully and think about the student's behavior during the past month or two. In some cases you may not have observed the student perform a particular behavior. Make an estimate which you think would be the most accurate description of the student. Circle only one letter from A to E for each item. Do not skip any items.

a = strongly agree  
b = agree  
c = don't agree or disagree  
d = disagree  
e = strongly disagree

- |   |           |
|---|-----------|
| 1. enjoys learning new things.  | a b c d e |
| 2. prefers easy assignments to more difficult tasks.                          | a b c d e |
| 3. able to keep up with the pace of instruction in my classroom.              | a b c d e |
| 4. gives up easily on tasks that are difficult or challenging.                | a b c d e |
| 5. must be supervised to get best performance on school work.                 | a b c d e |
| 6. works on problems until they are solved or understood.                     | a b c d e |
| 7. does only the minimum that is required for task completion.                | a b c d e |
| 8. demonstrates mastery of work that has been previously completed.           | a b c d e |
| 9. poor grades mostly a result of lack of ability rather than lack of effort. | a b c d e |
| 10. able to keep up with others in class                                      | a b c d e |

**a = strongly agree**  
**b = agree**  
**c = don't agree or disagree**  
**d = disagree**  
**e = strongly disagree**

11. needs improvement in organization and work habits.	a	b	c	d	e
12. becomes bored easily.	a	b	c	d	e
13. does not have the ability to perform at an average academic level	a	b	c	d	e
14. tries to avoid work in English/spelling.	a	b	c	d	e
15. not discouraged easily even after failures.	a	b	c	d	e
16. will try a new task readily even when not successful the first time.	a	b	c	d	e
17. completes math assignments without teacher prompting.	a	b	c	d	e
18. poor grades on assignments usually due to a lack of effort rather than to a lack of ability or a learning problem.	a	b	c	d	e
19. often makes efforts to learn more about topics that have been introduced in class.	a	b	c	d	e
20. doesn't like to do more school work than is required.	a	b	c	d	e
21. almost always completes homework in a timely manner.	a	b	c	d	e
22. prefers to figure out the problem independently rather than to be helped by others.	a	b	c	d	e
23. does not comprehend grade level material as easily as classmates	a	b	c	d	e
24. often does not complete assignments	a	b	c	d	e
25. completes reading assignments without teacher prompting.	a	b	c	d	e

**a = strongly agree**  
**b = agree**  
**c = don't agree or disagree**  
**d = disagree**  
**e = strongly disagree**

26. does not work to the best of ability.	a	b	c	d	e
27. completes science assignments without teacher prompting.	a	b	c	d	e
28. attributes failure in academics to outside sources (e.g., teacher, parents, inappropriate assignment, bad luck).	a	b	c	d	e
29. completes social studies assignments without teacher prompting.	a	b	c	d	e
30. has good overall motivation to achieve.	a	b	c	d	e
31. has poor motivation to achieve in English/spelling.	a	b	c	d	e
32. occasionally will work with persistence, but often does not give good effort unless supervised.	a	b	c	d	e
33. completes English/spelling assignments without teacher prompting.	a	b	c	d	e
34. works cooperatively with other students on group projects.	a	b	c	d	e
35. lacks basic academic skills	a	b	c	d	e
36. enjoys doing academic work in a competitive setting.	a	b	c	d	e
37. has had little success in school.	a	b	c	d	e
38. attributes success in academics to hard work.	a	b	c	d	e
39. able to monitor and correct own work	a	b	c	d	e
40. child expects to do well in school.	a	b	c	d	e
41. indicates that successes and failures are under own control.	a	b	c	d	e
42. works hard but still makes poor grades	a	b	c	d	e

**a = strongly agree**  
**b = agree**  
**c = don't agree or disagree**  
**d = disagree**  
**e = strongly disagree**

43. enjoys improving own personal best on academic tasks.	a	b	c	d	e
44. often prefers to repeat a task that has already been mastered, rather than attempt a new task.	a	b	c	d	e
45. likes to be the "best" on academic tasks	a	b	c	d	e
46. school failures mostly a result of limited ability	a	b	c	d	e
47. places high value on doing better than others on academic tasks	a	b	c	d	e
48. frequently interested in comparing own work to others' in the class	a	b	c	d	e
49. gives up quickly, easily embarrassed, or gets anxious when required to perform in front of others	a	b	c	d	e
50. is cooperative with peers in learning activities	a	b	c	d	e



APPENDIX K

TEACHER RATING SCALE OF INTERPERSONAL  
REJECTION

Student's Name \_\_\_\_\_ Teacher's Code \_\_\_\_\_

### STUDENT RATING SCALE

Please answer the following questions about the student whose name appears above. Please answer as honestly as possible; say how you personally feel about the student. Try to think of this student apart from your professional attitudes as a teacher. We want to know how you feel about this student from a personal point of view. All responses will remain strictly confidential; names will be removed and code numbers will be given to these forms.

- A. Please indicate the one best answer for each of the questions below. Use the following scale to answer each question:

DEFINITELY YES    1    2    3    4    5    6    7    DEFINITELY NO

For example, if you would definitely not be willing or interested in working with this child, you would indicate "7." If you don't care either way, you would want to put a "4." If you were very interested or willing in working with this child, you would want to indicate a "1."

To what degree would you be personally interested in the following activities with this child?

1. \_\_\_\_\_ Sit beside him/her for a three-hour bus trip?
2. \_\_\_\_\_ Take him/her to the zoo for the day?
3. \_\_\_\_\_ Have him/her come over to play with a child of yours once per week for a year?
4. \_\_\_\_\_ Babysit for him/her every other afternoon for a year?
5. \_\_\_\_\_ Take him/her to lunch a couple times per week for a year?
6. \_\_\_\_\_ Supervise him/her in an hour-long daily structured activity for a year?
7. \_\_\_\_\_ Individually tutor him/her three times a week for a year?
8. \_\_\_\_\_ Supervise him/her as a member of a club or group, such as girl or boy scouts, that meets in your home once per week for a year?
9. \_\_\_\_\_ Assuming it were possible, have him/her as a close family member such as a niece or nephew?
10. \_\_\_\_\_ Assuming it were possible, consider adopting him/her?

*(Please continue on the other side.)*

APPENDIX L

TEACHER RATING OF INTERPERSONAL  
ATTRACTIVENESS

Student's Name \_\_\_\_\_ Teacher's Code \_\_\_\_\_

**Student Rating Scale, Page 2**  
(Please continue.)

B. Below are sets of descriptions that can describe children's personal qualities. Please indicate the one best response for each of the items below by circling the appropriate number. Remember to report your personal responses that describe the child named above. Be as honest as you can; answers are confidential.

- |                   |   |   |   |   |   |   |   |                 |
|-------------------|---|---|---|---|---|---|---|-----------------|
| 1. CUTE           | 1 | 2 | 3 | 4 | 5 | 6 | 7 | PLAIN           |
| 2. ATTRACTIVE     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | UNATTRACTIVE    |
| 3. PRETTY         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | UGLY            |
| 4. BEAUTIFUL      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | HOMELY          |
| 5. PLEASANT       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | UNPLEASANT      |
| 6. FRIENDLY       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | UNFRIENDLY      |
| 7. ENJOYABLE      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | UNENJOYABLE     |
| 8. POSITIVE       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | NEGATIVE        |
| 9. STRONG         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | WEAK            |
| 10. HEALTHY       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | UNHEALTHY       |
| 11. ACTIVE        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | INACTIVE        |
| 12. NORMAL        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | ABNORMAL        |
| 13. WELL ADJUSTED | 1 | 2 | 3 | 4 | 5 | 6 | 7 | MALADJUSTED     |
| 14. BRIGHT        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | DULL            |
| 15. WELL BEHAVED  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | MISBEHAVED      |
| 16. SUCCESSFUL    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | UNSUCCESSFUL    |
| 17. CHEERFUL      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | UNCHEERFUL      |
| 18. RESPONSIBLE   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | NOT RESPONSIBLE |
| 19. OUTGOING      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | WITHDRAWN       |
| 20. CONFIDENT     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | NOT CONFIDENT   |

**THANK YOU!**

VITA

Colleen A. Ewing

Candidate for the Degree of

Doctor of Philosophy

Thesis: THE RELATIONSHIP OF DEPRESSIVE SYMPTOMATOLOGY AND  
ACADEMIC ACHIEVEMENT MOTIVATION IN THE SCHOOL TO THE  
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