2001

Depressive Symptoms and Academic Achievement in Fourth Grade Students

Michelle L. Harrison
Eastern Illinois University

THESIS/FIELD EXPERIENCE PAPER
REPRODUCTION CERTIFICATE

TO: Graduate Degree Candidates (who have written formal theses)

SUBJECT: Permission to Reproduce Theses

The University Library is receiving a number of request from other institutions asking permission to reproduce dissertations for inclusion in their library holdings. Although no copyright laws are involved, we feel that professional courtesy demands that permission be obtained from the author before we allow these to be copied.

PLEASE SIGN ONE OF THE FOLLOWING STATEMENTS:

Booth Library of Eastern Illinois University has my permission to lend my thesis to a reputable college or university for the purpose of copying it for inclusion in that institution's library or research holdings.

8/13/01
Date

I respectfully request Booth Library of Eastern Illinois University **NOT** allow my thesis to be reproduced because:

_____

_____

_____

_____ _____

Author's Signature Date

Running Head: CHILDHOOD DEPRESSION

Depressive Symptoms and Academic Achievement in Fourth Grade Students

Michelle L. Harrison

Assegedetch HaileMariam, Ph.D. (Thesis Chairperson)

Eastern Illinois University

Depressive Symptoms and Academic Achievement in Fourth Grade Students

BY

Michelle L. Harrison

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

Specialist in School Psychology

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS

2001
YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING
THIS PART OF THE GRADUATE DEGREE CITED ABOVE

August 3, 2001
Date

August 3, 2001
Date

Table of Contents

LIST OF TABLES

ACKNOWLEDGEMENTS

I would like to acknowledge a few individuals for their assistance with this project. First, I would like to thank Dr. Assegedetch HaileMariam, Dr. Christine McCormick, and Dr. Linda Leal for their assistance throughout this project. Special thanks to Dr. Assegedetch HaileMariam for her time, patience, and encouragement.

I would also like to thank the teachers, Susan and Melissa, who volunteered time and classrooms to participate in this study. I would also like to thank the children who participated in this study.

I would like to thank my parents and friends for their encouragement and support throughout this project.

ABSTRACT

The relationships among depressive symptoms, peer acceptance, and academic competence were examined in 43 fourth-grade students using a self-report measure of depression (Children's Depression Inventory); a teacher-rated measure of depression (Behavior Assessment System for Children – Teacher Rating Scale); peer acceptance and peer rejection; and grade point average. Results indicated higher levels of self-reported depression than previously found in children of this age. Correlations between self-reports of depression and peer rejection and self-reports of depression and grade point average were significant. The current study also found a significant positive correlation between the two depression scales (Children's Depression Inventory and Behavior Assessment System for Children – Teacher Rating Scale – Depression Scale). Implications for future research and limitations of the current study are discussed.

CHAPTER I

Introduction

Depressive Symptoms and Academic Achievement in Fourth Grade Students

Depression is a sad emotional state in which life seems bleak and hopeless and its events overwhelming. This emotional state can manifest itself through a number of observable behaviors. Symptoms of a major depressive disorder include:

> Depressed mood; markedly diminished interest or pleasure in all, or almost all, daily activities; significant weight loss or gain; decrease or increase in appetite; insomnia or hypersomnia; psychomotor agitation or retardation; fatigue or loss of energy; feelings of worthlessness or excessive or inappropriate guilt; diminished ability to think or concentrate or indecisiveness; or recurrent thoughts of death or recurrent suicidal ideation. Symptoms that clearly are due to a general medical condition, or mood-incongruent delusions or hallucinations are excluded. (American Psychiatric Association, 1994).

These symptoms may be indicated by either subjective self-report or observation made by others.

Although research in childhood depression has lagged behind the advances made in the study of depression in adults, studies conducted throughout the 1980s and 1990s have indicated that many children experience depressive symptoms, such as persistent crying, negative self-concept, decreased activity, social withdrawal, and suicidal thoughts (Kazdin, 1990). These symptoms are beyond feeling sad for a loss or having a bad day; depression is a pervasive mood of unhappiness. Kazdin (1990) and Edward and Starr (1996) identified symptoms of depression from a developmental perspective. For

instance, loss of weight, temper tantrums, concentration difficulties, and sleeplessness are some symptoms depressed children between 6 and 12 years of age experience. However, Sattler (1998) cautions, "Because many of these signs occur in children who are developing normally, a depressive disorder should be considered primarily when the symptoms (a) reflect a change in the children's behavior maintained over time and (b) are detrimental to a child's functioning" (p.364).

Diagnosis of childhood depression appears to be complicated by comorbid conditions. Sattler (1998) noted Gotlib & Hammen's (1992) work that pointed out that there are disorders that often coexist with depression, such as anxiety, conduct disorders, and oppositional disorders . For accurate diagnosis, most researchers support a multi-modal, multi-informant approach (Goodyr, 1995). Depressive symptoms may be indicated by either subjective self-report or reports made by others who are familiar with the child, such as teachers and parents. A number of questionnaires are available for the reporting of depressive symptoms, both behavioral and emotional.

Some studies suggest that approximately two percent of children between the ages of four and sixteen experience a major depressive disorder (Kazdin, 1994). Sattler (1998) cited different rates of prevalence for children of different ages: about 1% of children in the 2- to 3-year range, 2% of children between the ages of 6 and 12, and about 6% of adolescents have been reported to be depressed. It is likely that many more children experience a state of depression to a lesser degree; either having depressive feelings for a shorter duration or fewer symptoms than required for a formal diagnosis of depression. Gender differences in the prevalence of depression do not seem to appear until children

reach adolescence. At this time, the prevalence of depression appears to be greater in females than in males (Sattler, 1998).

Although both biological and psychological causes have been cited (Kazdin, 1990), the causes of depression are not completely understood. Biological theorists emphasize a deficit in or imbalance of neurotransmitters and biological predisposition as an important cause of depression. Support for this theory comes from the efficacy of pharmacological treatment for depression in the form of antidepressant medications such as Prozac or Zoloft (Brown & Sawyer, 1998). Psychosocial theories of causation propose that depression results from limited rewards or satisfactions received from interactions with the environment (particularly caretakers), learned helplessness, stress, and poor interpersonal problem-solving skills (Lewinsohn, 1974). Another approach is the behavioral theoretical standpoint. Behavioral approaches emphasize a functional analysis of each individual's behavior (Gotlib & Hammen, 1992). An individual's depressive behavior may be a response to the environment, but the behavior also changes the environment. In addition, the environment provides consequences that may increase or decrease the likelihood of the individual displaying depressive behavior again under similar circumstances.

Childhood depression is a source of major concern to parents and educational professionals because of its increasing prevalence and its impact over the course of a child's life, in and out of the classroom. Blechman, McEnroe, Carella & Audette, (1986) pointed out that depression may disrupt children's cognitive styles and their interpersonal, affective, and intellectual functioning. Sattler (1998) reiterated that depressed children frequently have academic difficulties, low achievement, and

interpersonal difficulties. He concluded, "Depression, then, often disrupts children's cognitive, academic, and interpersonal functioning," (p.364). In contrast, positive academic outcomes have been related to displays of prosocial behavior, high levels of interest in schoolwork, and effort levels (Wentzel, 1993).

Children who experience academic success are likely to have put a good deal of effort into schoolwork, and because they experience a positive academic outcome, they are likely to continue to put considerable effort into future academic tasks. According to Wentzel (1993), given the symptoms of depression, there appears to be an inverse relationship between positive academic outcomes and depression. In this study, the relationship between social competence and achievement was assessed while controlling for the students' IQ, sex, ethnicity, family structure, and school absences. Children who were accepted by their peers, measured by peer nomination of their best friends (circling the names of their three best friends on a class roster) and peer rating (responding on a five-point scale to how much you would like to be in school activities with each individual in the class), had grade point averages that were significantly higher than children who were not well-accepted. In addition, prosocial behavior, as measured by peer nominations of prosocial behavior (shares/cooperates and helps other kids when they have a problem) and antisocial behavior (starts fights and breaks rules/does things he or she is not supposed to do), was found to be a significant, positive predictor of academic outcomes, as measured by grade point average. In Wentzel's (1993) study, social behavior was a much stronger predictor of students' grades than their standardized test scores. She suggested that students' grades are reflections more of the social context of the classroom than of strictly academic skills.

Most current theories of depression generally agree that external stressors act on personal predispositions to produce bouts of depression (Dodge, 1983). In the lives of school children, external stressors may include the lack of friendships, rejection by peers, and negative academic outcomes. Internal stressors that children may experience include low self-esteem and poor self-efficacy. Wentzel & Asher (1995) made a distinction between academic and social self-efficacy. Academic self-efficacy centers on perceived capability to fulfill academic demands. Social self-efficacy centers on perceived ability to develop and maintain social relationships. Children who are confident in their academic ability may be less vulnerable to depression because they anticipate fewer academic stressors than children who are not confident in their ability. Bandura, Pastorelli, Barbaranelli, and Capara (1999) found that children who were depressed reported low senses of academic self-efficacy and, in turn, had less academic success. There seems to be a relationship between perceived academic self-efficacy and positive academic outcomes, but the direction of that relationship is undetermined. Research examining whether children who have high perceived academic self-efficacy do well academically or if children who perform well academically consequently have high perceived self-efficacy is inconclusive.

Depression has been associated with impaired intellectual functioning in children and lowered academic performance and learning disabilities. Several studies, including one by Fristad, Topolosky, Weller, and Weller (1992), suggested an overlap between depression and learning disabilities. They found the percentage of children with one or more learning disabilities among children with major depressive disorder was seven times that of the general population. Children with learning disabilities, particularly

those who have undiagnosed disabilities, may experience less academic success than those without learning disabilities. It is possible that children who are depressed may lack the desire and motivation to experience success in school. It is also possible that children who do not experience success in school may begin to feel depressed.

Research has shown that a negative correlation exists between academic competence and depression. Cole (1990) reported that depressive symptoms were more strongly associated with social and academic success than was previously suggested by other studies. The academically less competent groups in his study had higher depression scores on the Children's Depression Inventory than did the academically competent group. Depression correlated with a measure of social competence (r = -. 82) and with a measure of academic competence (r = -.80).

Deficits in social and academic competence have also been implicated both as causes and as consequences of depression. According to Patterson and Capaldi (1990), failures in the social and academic areas constitute major sources of negative life experiences, which may possibly trigger depression. Depression may affect the desire a child has to interact with others or to engage in academic activities, which may decrease the academic success that the child will experience. Children who do not engage in active learning are not likely to learn as much as children who actively participate in the learning process. Cole, Martin, Powers, and Truglio (1996) found strong and significant relationships among depression, social competence, and academic competence in sixth grade students. Their results suggest that social deficits may put children at risk for depression in the future.

In recent years, considerable attention has been given to children who are rejected by their peers and who have problems making friends. These children are now being perceived as at risk for violent outbursts against fellow classmates as a result of recent school shootings. Attention has been directed toward learning if these rejected children, even as young as kindergarten and first grade, experience greater feelings of worthlessness or social dissatisfaction; decreased sense of self esteem or self efficacy; and whether this rejection is related to academic failure or further social rejection.

Research investigating the association between behavioral disorders and self-esteem has suggested that depressed children display lower levels of self-esteem than do non-behavior disordered children (Stanger & Lewis, 1993). Children who experience low self-esteem may likely doubt their academic abilities and are more likely to give up on tasks or to avoid engagement in difficult academic activities (Durrant, Cunningham, & Voelker, 1990). Depression can affect all children, those with learning problems, behavior problems, social problems, or no problems at all. Relationships among academic competence, social competence, and depression may be more pronounced in children with problems. Stanger and Lewis (1993) recognized that children with many problems in one arena tend to have problems in other arenas as well.

It appears from past research that behavioral variables, such as depressive symptoms and peer acceptance, are as important as academic achievement in children's self-perceptions. Cognitive self-concept, a child's sense of academic competence, was found to be significantly predicted by behavioral scores. Durrant et al.(1990) found that children who scored higher on depression scales tended to score lower on measures of self-concept and self-esteem.

Research has established a significant link between peer relationships and children's academic achievement. There is ample evidence to suggest that students' social behavior at school is related to academic achievement. Students who display prosocial behaviors are more likely to experience positive interactions with peers and teachers, whereas students who are withdrawn, like many depressed children, are less likely to engage in social interactions with peers. Wentzel and Caldwell (1997) found that cohesive social groups might be particularly influential in promoting and enforcing sets of norms and values that can either undermine or facilitate academic achievement. That is, the types of peers a child spends time with may influence the importance he or she places on academic success. In a study which followed children from kindergarten through second grade, the effects of early peer rejection that starts as early as kindergarten and is stable through second grade impacted work habits and academic achievement (O'Neil, Welsh, Ross, Wang, & Strand, 1997).

Children as young as first and second grades have a basic understanding of the concept of loneliness and can make reliable reports of their own feelings of loneliness that are related to acceptance or rejection by peers (Cassidy & Asher, 1992). However, most measures of depression for children are not appropriate for use until children reach third or fourth grade. If there is a relationship between academic achievement and acceptance by peers, children who feel rejected may not be learning the basic skills needed for later academic success. Cassidy and Asher (1992) suggested that children's ability to form close relationships as young children have been found to be predictive of later friendship formation, academic achievement, and adjustment in later life.

Most of the studies discussed above investigated the relationships among depression, peer acceptance, peer rejection, and academic achievement using a variety of depression scales, parent or teacher rating scales, peer nominations, peer ratings, and grades (measured by grade point average) in academic areas. Examples of such measures follow.

The Children's Depression Inventory: The Children's Depression Inventory (CDI; Kovacs, 1982) is a 27-item measure of depressive symptoms. This self-report inventory measures the features that characterize depression such as hopelessness, loss of appetite, loss of interest in pleasurable activities, and self-deprecation. Children report on their thoughts, attitudes and beliefs, their physical state, and the nature of their recent behavior over the past two weeks. These scores are compiled in five subscales: negative mood, interpersonal problems, ineffectiveness, anhedonia, and negative self esteem, as well as a total CDI score. Each item consists of three statements, with a response range from zero to two. Higher scores reflect greater depression. Total scores may range between 0 and 54. The raw scores are translated into T-scores based on gender and age of the respondent (grouped from ages 7-12 and 13-17). The CDI has acceptable internal reliability and construct validity, particularly in nonclinical samples (Kovacs, 1982;Saylor, Finch, Spirito, & Bennett, 1984).

Behavior Assessment System for Children (BASC): This is a measure used for the assessment and identification of school-aged children with emotional disturbances and behavioral disorders in the school setting. The questions on the BASC were carefully developed from theories of developmental psychopathology and personality development and derived from a literature review and as well as from clinical experience (Reynolds

and Kamphaus, 1998). This multi-informant method has three rating scales that can be used individually or in combination: Self-Report of Personality, Parent Rating Scale, and Teacher Rating Scale. The BASC also provides Structured Developmental History as well as Student Observation System. Discussion of the Teacher Rating Scale (BASC-TRS) follows.

The response form for the TRS presents descriptions that the teacher rates on a 4-point scale, and it requires approximately ten to twenty minutes to complete per student. The TRS measures clinical problems in three broad domains: Internalizing Problems, Externalizing Problems, and School Problems. The Internalizing Problems Scale is composed of three scales: anxiety, depression, and somatization. Each item on the BASC-TRS contributes to only one scale; a covariance structure analysis was used to determine the proper placement and function of each item (Reynolds & Kamphaus, 1998).

The norms for the TRS are based on a large sample that is representative of the United States population with regard to sex, race or ethnicity, and special education placement. Weighting was done to make the sample match the general population with respect to race or ethnicity, maternal education, geographical location, and special education placement. The normative sample also included children with identified behavioral and emotional disorders. Internal consistency is high for the child version (age 8-11) of the TRS, ranging from .77 to .88 (Reynolds & Kamphaus, 1998). The reliability of scales measuring internalizing behaviors are lower than externalizing behaviors; the coefficient alpha reliabilities of the depression scale for 8-11 year olds are .67 for females, and .79 for males. The test-retest correlations for the composites are high,

ranging from .70 to .90, while the correlations for individual scales range from .63 to .71. The test's long term stability is adequate, as one-month test-retest reliabilities range from .85 to .94.

The high mean score on the Depression Scale supports the construct validity of the scale. Confirmatory factor analytic techniques have validated the authors' conceptualization of what is being measured. The BASC Manual (Reynolds & Kamphaus, 1998) reports correlational studies between the TRS and five other well-known teacher report forms: Achenbach's Teacher Report Form, Quay and Peterson's Revised Behavior Problem Checklist, Conners' Teacher Rating Scales, Burks' Behavior Rating Scales, and the Teacher Rating Scale of the Behavior Rating Profile. The correlations between the TRS and these other scales are relatively high in parallel areas, but the correlations between the TRS and the Achenbach scales are in the .80s and .90s.

Peer Nomination: Peer nomination is a widely used sociometric method for assessing peer acceptance and peer rejection. For peer nomination, Taylor (1989) asked students to select three peers with whom they would like most to associate in a particular situation such as at play, at work, or in a friendship (positive nomination). For negative nominations (peer rejection), students selected one peer with whom they would not like to do anything (Parker and Asher, 1987). Many researchers, including Parker and Asher (1987) have supported the use of peer nominations. After reviewing available social skill assessment procedures, the researchers concluded that only peer nominations and ratings by others could provide reliable and valid assessment of a child's social position.

Grade Point Average (GPA): Grades reflect learning within a larger social context that requires effort and persistence over long periods of time (Wentzel, 1991). Other

measures of achievement, such as standardized tests, measure specific academic abilities without considering the larger social context. GPAs were found to be significantly related to standardized test scores ($r = .75$, $p < .001$) on the Stanford Test of Basic Skills (Wentzel, 1996). Some researchers, including Taylor (1989), have discussed the subjective nature of classroom grading scales and suggested that grades may not be an accurate measure of academic achievement. It appears teachers set their own grading criteria.

Statement of the Problem

In summary, research on peer acceptance has consistently shown that peer relationships are related to children's academic lives at school. Children who display cooperative behaviors tend to be well liked by their peers and to earn high grades (Cole, 1990). According to Cole (1990), social and academic competence appeared to have a cumulative effect on decreasing the likelihood of symptoms of depression.

The purpose of this study was to examine the relationships among depressive symptoms, peer acceptance, and peer rejection, as well as academic achievement in fourth grade students. Children who are less competent in either the academic or social arenas may be more competent in the other arena, so children who are incompetent in both arenas may be especially at risk for developing depressive symptoms. Peers in the social arena and grades in the academic arena routinely give children feedback on their competence in social and academic arenas – peer acceptance or peer rejection. A feeling of loneliness that may be associated with being friendless or rejected by peers is a significant source of psychological distress. This psychological distress may manifest itself in the form of depression (Cole, 1990).

CHAPTER II

Method

Participants

Participants in this study were 43 fourth grade students from a Midwestern city. The group did not vary considerably in terms of gender: 51.2% (22) of the sample were girls and 48.8% (21) were boys. The mean age of the participants was 9.85 years. Most, 60.5% (26), were Caucasian and 39.5% (17) were African American. The sample represented all students in each of the selected classrooms except for nine students who were excluded from the study; four because they declined to participate, four did not return a signed consent form, and one had not been in the current classroom for more than a month. In addition, the two classroom teachers participated. Each teacher had six years of teaching experience.

Instruments

The following measures were used to assess depressive symptoms in participants: The Children's Depression Inventory (CDI) and the Behavior Assessment Scale for Children - Teacher Rating Scale (BASC-TRS). In addition, the following measures were used: Peer Nominations (acceptance and rejection) and Grade Point Average (GPA).

The Children's Depression Inventory: The Children's Depression Inventory, CDI, (Kovacs, 1982) is a 27-item measure of depressive symptoms. This self-report inventory measures the features that characterize depression such as hopelessness, loss of appetite, loss of interest in pleasurable activities, and self-depreciation. This questionnaire asks children to report on their thoughts, attitudes and beliefs, their physical state, and the nature of their recent behavior over the past two weeks. Tests were hand-scored, and T-

scores were calculated according to the gender of the participant, based on raw scores ranging from zero to 54. T-scores above 70 are considered clinically significant.

The Behavior Assessment System for Children – Teacher Rating Scale (BASC-TRS): This is a measure used for the assessment and identification of school-aged children with emotional disturbances and behavioral disorders in the school setting. The two teachers completed this scale for each child in their respective classrooms. The BASC-TRS measures clinical problems in three broad domains; however, the present study used the depression subscale only, although teachers completed the entire TRS form. Each test was computer-scored using the BASC compuscore software. This program calculated T-scores based on raw scores and considering the gender of the child. T-scores above 70 are considered significant, and T-scores 60 to 69 are considered at-risk.

Peer Nominations of Acceptance and Rejection: This sociometric method asks students to select the three peers they would most like to associate with in a particular situation. Peer acceptance was measured based on peer nominations in three arenas: social, athletic, and academic. Each participant was given a single sheet of paper with four questions: (a) name three people in this class you would choose to sit with at lunch, social; (b) name three people in this class you would choose to be on your sports team, athletic; (c) name three people in this class you would choose to work with on a science project, academic; and (d) name one person in this class you would not choose to do anything with, a measure of peer rejection (see Appendix C for sociometric rating scale for peer nominations). The same three classmates could be selected in more than one category. For each of the three arenas, the maximum score was the number of

participating students, 26 or 17 depending on the class. Scores for the three arenas were collapsed to form one combined acceptance score. Thus, the individual's score on the combined peer acceptance measure would be the number of times that student was selected across all three arenas.

Grade Point Average (GPA): GPA was used to measure academic success. GPA was computed from the following core classes: Reading, science, math, social studies, and spelling for the first three quarters of the school year, as data collection took place during the fourth quarter. This was based on a four-point grading scale, with zero being the lowest score (grade of F) and four being the highest score (grade of A). The grading scale excluded plus or minus grades. GPA was calculated for each student using school records.

Data Analysis

Data were analyzed using descriptive statistics and Pearson product-moment correlation coefficients. Pearson product-moment correlation coefficients were used to examine the degree and direction of the relationships among the following variables: Total CDI Score, BASC-TRS Depression Scale, peer acceptance, peer rejection, and GPA.

Procedure

A letter requesting parental permission was sent home two weeks before data collection began. The letter asked parents for permission for their children to participate in a voluntary data collection session examining feelings and peer relationships in relation to grades (see Appendix A). Parents were also informed that their child's grades would be reviewed. Parents were assured of the confidentiality of student responses

because individual responses would not be reported. Instead, group results would be available to participants - students, parents, and teachers. The letters were sent home from school with the student. The children were instructed to return the form with a parent's signature the following day. If a signed letter was not received within a week, a second letter was sent home. Students who chose not to participate or who failed to return a permission letter were given time to work on their homework during data collection.

Each classroom was individually scheduled for a 30-45 minute data collection session. The researcher administered the CDI and peer nomination (acceptance and rejection) during a single session. One classroom completed the peer nomination measures first; the other classroom completed the CDI first. All items on the CDI were read aloud so all students could proceed at the same pace regardless of their reading ability. Students were assured of the confidentiality of their responses. The students' desks were moved apart so as to ensure confidentiality. To allow students a sufficient amount of time to become acquainted with each other and their teacher, data collection sessions took place during the second semester of the school year. The teachers completed the BASC-TRS forms within two weeks of the classroom data collection session. Students were allowed to ask questions during all stages of data collection. Following data collection, students were given a debriefing statement (see Appendix B), informing them that the school social worker would be available if they wanted to talk about their friendships and feelings following participation in the study. Furthermore, a follow-up interview was done on children who scored within the clinically significant range for depression on the CDI.

CHAPTER III

Results

First, descriptive statistics were calculated for depression, peer acceptance, peer rejection, and grade point average. Second, Pearson product-moment correlation coefficients were used to examine the degree and direction of relationships between these variables. Table 1 presents the Mean and Standard Deviation for the CDI; BASC-TRS Depression Scale; peer nominations for social, athletic, academic, and combined acceptance; peer rejection; and GPA.

The presence or absence of depression was assessed using the CDI and BASC-TRS Depression Scale. The majority of participants did not report having experienced significant levels of depressive symptoms on the CDI. Eight-eight percent of participants' T-scores on the CDI were below 70, indicating the absence of significant depressive symptoms. The mean CDI score was 48.26 (SD = 13.92). On the BASC-TRS Depression Subscale, teachers did not rate their students as demonstrating depressive symptoms within the clinically significant range. Only 12% of participants received a T-score on the BASC-TRS within the at-risk range, 60 and 69 (Mean = 47.21, SD = 7.58). See Table 2 for significant T-scores on the CDI and BASC-TRS Depression Scale.

Peer acceptance and peer rejection were examined using peer nominations. Based on the combined acceptance score (for comparison purposes, scores for the social, athletic, and academic items were collapsed), 9.3% of children were not selected by any of their peers, while four children (9.3%) were selected by over half of their classmates. Descriptive statistics for the combined peer acceptance measure are presented in Table 3.

Further, on the measure of peer rejection (name one person in your class with whom you would not like to do anything) almost 40% of participants were rejected by at least one person in their class, i.e., other students would avoid doing something with them. The majority of students (60.5%) were not rejected by anyone (Mean = .73, SD = 1.12).

Based on peer nominations, participants received the following scores in the social, athletic, and academic arena (Descriptive statistics for peer nominations in social, athletic, and academic arenas are presented in Table 4). Within the social arena, 37.2% of children were not selected by any of their classmates. The majority of the students (62.8%) were selected by at least one other peer (Mean = 1.93, SD = 2.03).

In the athletic arena, 34.9% of students were not selected by any of their peers. On the other hand, 65.1% were selected by at least one other classmate (Mean = 2.05, SD = 2.13). On the third arena, academic, 37.2% of children were not selected by any of their classmates. About 62% were selected by at least one other peer in the academic arena (Mean = 2.05, SD = 2.13).

It appears that if a child is selected in one arena, he or she is frequently selected in other arenas as well. Many times, a child named the same three classmates for each of the three acceptance arenas. There were four children who were not selected in any of the three arenas; all other children were selected at least once. Two of these four non-accepted children were not nominated on the peer rejection measure. There appeared to be no gender differences in areas of selection.

Grade point average, a measure of academic achievement, indicated that 42% of participants had a GPA over 3.0, 35% over 2.0, and 23% had a grade point average below 2.0 (Mean = 2.62, SD = .81).

A Pearson's correlation was conducted to determine the relationship among the CDI and the BASC-TRS, peer acceptance, peer rejection, and GPA. Table 5 shows Pearson's Correlations among the CDI, BASC-TRS-Depression Scale, peer acceptance, peer rejection, and GPA comparisons.

A significant negative correlation between the CDI and peer acceptance ($r = -.31$, $p < .05$) was found. There was also a significant negative correlation between the CDI and GPA ($r = -.32$, $p < .05$). Additionally, correlations between the CDI and the BASC-TRS depression scale were significant ($r = .73$, $p < .05$). Correlations between the CDI and peer rejection were also significant ($r = .35$, $p < .05$).

When peer rejection was compared to GPA, results showed a significant negative correlation between the two ($r = -.37$, $p < .05$). Peer acceptance was compared to grade point average as well; and results indicated a positive correlation that approached significance ($r = .25$, $p < .05$). There was a significant negative correlation between peer acceptance and BASC-TRS depression scale ($r = -.32$, $p < .05$).

CHAPTER IV

Discussion

The purpose of this study was to examine the relationships among depression, peer acceptance, peer rejection, and academic achievement (grade point average) in fourth grade students. Previous studies had indicated that children who demonstrated depressive symptoms and were rejected by their peers were less likely to be successful academically (Cole, 1990).

Results of the present study found a significant correlation between the CDI and the BASC-TRS depression scale, indicating at least a moderate level of agreement between the self-reported measure and the teacher-reported questionnaire measuring the symptoms of depression. Eleven percent of participants scored within the clinically significant range on the CDI, which was much higher than it was previously reported in the general population (2%) for this age group (Sattler, 1998). However, their teachers rated none of the children as showing clinically significant depressive symptoms on the BASC-TRS Depression Scale.

One possible explanation for this may be that children are more reliable assessors of their own internal feelings and thoughts than are teachers. Self-report measures rely on the honest responses of the participants about their thoughts and feelings. The teacher-reported measure of depressive symptoms could measure only the observable symptoms of depression, behaviors, for example. Follow-up interviews with the children who scored within the clinically significant range for depression on the self-report depression measure (CDI) revealed that these children either had been diagnosed with depression and were under treatment (one student), they had experienced recent loss

(three students) and were being observed by the social worker, or had been in trouble that day (one student).

The negative correlation between the Total CDI score and GPA and peer rejection and GPA suggested that children's perceived depression and rejection by their peers were associated with lower GPAs as found in previous studies. One possible explanation for this is that the symptoms of depression include a loss of interest in everyday activities (American Psychiatric Association, 1994). Thus, the depressed child could lose interest in interacting with his or her peers and may not have the desire to achieve academically (Cole, 1990). The moderate positive correlation between the CDI total score and peer rejection may suggest that as children became more depressed, they are more likely to be rejected by their peers. The negative correlation between self-reported depression and peer acceptance may suggest that peer acceptance may buffer children from depression.

The significant negative correlation between peer rejection and grade point average indicates that high peer rejection may be associated with low grades. In this study, 23% of participants were failing (< 1.90 GPA) but, overall, only four children (9.3%) were not accepted by any classmates. One possible explanation may be that children who receive low grades may be accepted by the classmates who also receive low grades.

Further, even though the number of rejected children and children who are not selected for inclusion in any activity is small, 5% and 9%, respectively; it is a cause for concern that any child is in this position. However, it may be possible that these children are accepted by classmates who did not participate in the study or by children who are in another class.

The fact that 20% of participants were failing by the 3rd quarter is also a cause for concern. This is not to suggest that depression and social status are the only influential variables, the study did not consider other variables, such as SES or parental educational levels, which may account for academic failure. Regardless, the high level of academic failure must be very distressing for children who are failing.

Study Limitations and Future Directions

Several limitations of this study need to be considered. The small size of the study sample and its selection criteria impose inferential limitations on the reported findings. Participants were not selected through a randomization process; they were selected based on the classroom in which they were placed because their classroom teacher agreed to participate; and the sample was too small (N = 43). Furthermore, the study did not control for covariates or comorbid conditions that may contribute to depression peer acceptance, peer rejection, and academic achievement. A replication of this study with a larger sample size would be desirable. More research on the complex relationship between emotional and academic functioning is clearly needed, given the impact of both on later life.

References

American Psychiatric, Association (1994). Desk Reference to the Diagnostic Criteria from DSM-IV. Washington DC: American Psychiatric Association.

Bandura, A., Pastorelli, C., Barbaranelli, C., & Capara, G.V. (1999). Self-efficacy pathways to childhood depression. Journal of Personality and Social Psychology, 76, 258-269.

Blechman, E.A., McEnroe, M.J., Carella, E.T. & Audette, D.P. (1986). Childhood competence and depression. Journal of Abnormal Psychology, 95, 223-227.

Brown, R.T. & Sawyer, M.G. (1998). Medications for school-age children, effects on learning and behavior. New York: Guilford Press.

Cassidy, J. & Asher, S.R. (1992). Loneliness and peer relations in young children. Child Development, 63, 350-365.

Cole, D.A. (1990). Relation of social and academic competence to depressive symptoms in childhood. Journal of Abnormal Psychology, 90, 422-429.

Cole, D.A., Martin, J.M., Powers, B., & Truglio, R. (1996). Modeling causal relations between academic and social competence and depression: A multitrait-multimethod longitudinal study of children. Journal of Abnormal Psychology, 105, 258-270.

Dodge, K.A. (1983). Behavioral antecedents of peer social status. Child Development, 54, 1586-1599.

Durrant, J.E., Cunningham, C.E., & Voelker, S. (1990). Academic, social, and general self-concepts of behavioral subgroups of learning disabled children. Journal of Educational Psychology, 82, 657-663.

Edward, G., & Starr, M. (1996). Internalizing disorders: Mood and anxiety disorders. In M.J. Breen & C.R. Fielder (Eds.), Behavioral Approach to assessment of youth with emotional/behavioral disorders: A handbook for school-based practitioners (pp. 361-412). Austin, TX: Pro-Ed.

Fristad, M.A., Topolosky, S., Weller, E.B., & Weller, R.A. (1992). Depression and learning disabilities in children. Journal of Affective Disorders, 26, 53-58.

Goodyr, I.M. (1995). The Depressed Child and Adolescent: Developmental and Clinical Perspectives. Cambridge Monographs in Child and Adolescent Psychiatry. New York: Cambridge University Press.

Gotlib, I.H. & Hammen, C.L. (1992). Psychological aspects of depression: Toward a cognitive-interpersonal integration. The Wiley series in clinical psychology, Winchester, England: Wiley. In J.R. Sattler (1998), Clinical and forensic interviewing of children and families: Guidelines for the mental health, education, pediatric, and maltreatment fields. San Diego, Jerome M. Sattler, Publisher, Inc.

Kazdin, A.E. (1994). Psychotherapy for children and adolescents. In A.E. Bergin & S.L. Garfiel (Eds.) Handbook of Psychotherapy and Behavior Change (4th ed.) New York: Wiley.

Kazdin, A.E. (1990). Childhood depression. Journal of Child Psychotherapy, 48, 644-657.

Kovacs, M. (1982). The Children's Depression Inventory (CDI): A Self-Rating Depression Scale for School-Aged Youngsters. Psychopharmacology Bulletin, 21, 995-1124.

Lewinsohn, P. M. (1974). A behavioral approach to depression. In R.J. Friedman & M.M. Katz (Eds.), *The psychology of depression: Contemporary theory and research* (pp. 157 – 185). New York: Winston-Wiley.

O'Neil, R., Welsh, M., Parke, R.D., Wang, S., & Strand, C. (1997). A longitudinal assessment of the academic correlates of early peer acceptance and rejection. Journal of Clinical Child Psychology, 26, 290-303.

Parker, J.G. & Asher, S.R. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? Psychological Bulletin, 102, 357-389.

Patterson, G.R., & Capaldi, D.M. (1990). A comparison of models for boys' depressed mood. In J.E. Rolf, A. Matsen, D. Ciccheti, K. Neuchterlein, & S. Weintaub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 141-163). Cambridge, England: Cambridge University Press.

Reynolds, C.R. & Kamphaus, R.W. (1998). Behavior Assessment System for Children. Circle Pines, MN: American Guidance Service, Inc.

Sattler, J.R., (1998). Clinical and forensic interviewing of children and families: Guidelines for the mental health, education, pediatric, and child maltreatment fields. San Diego, Jerome M. Sattler, Publisher, Inc. p.364.

Stanger, C. & Lewis, M. (1993). Agreement among parents, teachers, and children on internalizing and externalizing behavior problems. Journal of Clinical Child Psychology, 22, 107-115.

Taylor, A.R., (1989). Predictors of peer rejection in early elementary grades: Roles of problem behavior, academic achievement, and teacher performance. Journal of Clinical Child Psychology, 18, 360-365.

Wentzel, K.R. (1996). Relations between social competence and academic achievement in early adolescence. Child Development, 62, 1066-1078.

Wentzel, K.R. (1993). Does being good make the grade? Social behavior and academic competence in middle school. Journal of Educational Psychology, 85, 357-364.

Wentzel, K.R. & Asher, S.R. (1995). The academic lives of neglected, rejected, popular, and controversial children. Child Development, 66, 654-763.

Wentzel, K.R. & Caldwell, K. (1997). Friendships, peer acceptance, and group membership: Relations to academic achievement in middle school. Child Development, 68, 1198-1209.

Appendix A

Parental Consent

Eastern Illinois University * School Psychology Program
Department of Psychology Charleston, IL 61920

Parental Consent Form

I am a graduate student in School Psychology at Eastern Illinois University. The purpose of this data collection is to enable me to write a thesis on the way student's feelings and emotions relate to their grades. As a participant in this study, your child will be asked to complete questionnaires about feelings and peer relationships. I will also review your child's grades.

The information collected in this study will be used for research purposes only. Student responses to questions will not be shared with students or school employees. There will be no way to link your child's name or the name of your child's school to any records. A summary of the results is available to teachers and parents upon request.

Your agreement for your child to participate in this project is voluntary. You have the right to withdraw him/her from this project at any time. If you have any questions or concerns, or would like more information about his research, please contact Michelle Harrison at 424-3266.

I HAVE READ AND UNDERSTAND THE PURPOSE OF THIS PROJECT AND THE RIGHTS OF MY CHILD AS A PARTICIPANT. I GIVE CONSENT FOR MY CHILD TO PARTICIPATE IN THIS PROJECT.

_____ _____

Parent's Signature Date

_____

Child's Name

Appendix B

Debriefing Statement

Eastern Illinois University * School Psychology Program
Department of Psychology Charleston, IL 61920

Debriefing Statement

Thank you for your participation in this study. The goal of this study is to learn more about the way children feel about themselves and their friendships and the way that affects grades. After this activity, if you feel like talking to someone, the social worker or I are available to talk with you.

If you have any questions or comments about this study, please call Michelle Harrison at 424-3266 on Monday, Wednesday, or Friday mornings from 8-10.

Appendix C

Sociometric Rating Scale for Peer Nominations

Sociometric Rating Scale for Peer Nominations

1. Name three people in your class you would choose to sit with at lunch.

_____

_____

_____

2. Name three people in your class you would choose to be on your sports team.

_____

_____

_____

3. Name three people in your class you would choose to work with on a science project.

_____

_____

_____

4. Name one person in this class you would not choose to do anything with.

_____

Tables

Table 1

The Mean and Standard Deviation for CDI; BASC-TRS Depression Scale; Peer Nominations for Social, Athletic, Academic, and Combined Peer Acceptance; Peer Rejection; and GPA

Measure	M	SD
CDI	48.26*	13.92
BASC-TRS (DS)	47.21*	7.58
Peer Nominations for		
1. Social	1.93	2.03
2. Athletic	2.05	2.13
3. Academic	1.80	2.26
4. Combined (1,2,3)	5.77	5.04
5. Reject	0.72	1.12
GPA	0.81	0.81

n = 43

Note: CDI: Children's Depression Inventory, min = 24.0*, max. = 84.0*; BASC-TRS: Behavior Assessment Scale for Children – Teacher Rating Scale Depression Scale, min = 41.0*, max. = 64.0*; Combined: combined acceptance score for social, athletic, and academic areas; GPA: grade point average based on grades in first three quarters in reading, science, math, social studies, and spelling, min = 1.20, max. = 3.90.

*T-Score

Table 2

Descriptive Statistics for Significant T-scores on the CDI and BASC-TRS Depression Scale

Depression Measure	T-Score	Number of Participants	Percent
CDI	< 70	38	88.3
	> 70	5	11.7
BASC-TRS (DS)	< 60	38	88.3
	60-69	5	11.7
	> 70	0	0.0

n = 43

Note: CDI: Children's Depression Inventory – scores over 70 are considered clinically significant; BASC-TRS Depression Scale: Behavior Assessment Scale for Children - Teacher Rating Scale, Depression Scale - scores over 70 are considered clinically significant, scores from 60 to 69 are in the at-risk range, and scores under 60 are not clinically significant.

Table 3
Descriptive Statistics for Combined Peer Acceptance Measure

Collapsed Number Of Nominations Across Arenas	N	Percent
0	4	9.3
1	5	11.6
2	5	11.6
3	6	14.0
4	2	4.7
5	5	11.6
6	1	2.3
7	1	2.3
8	4	9.3
10	1	2.3
11	1	2.3
12	1	2.3
13	1	2.3
14	2	4.7
15	1	2.3
16	3	7.0

n = 43
Note: Combined measure based on collapsed scores for social, athletic, and academic peer acceptance nominations

Table 4
Descriptive Statistics for Peer Nominations in Social, Athletic, and Academic Arenas

Number of Peer Nominations for Each Arena	n	Percent
Social		
0	16	37.2
1	7	16.3
2	4	9.3
3	6	14.0
4	3	7.0
5	4	9.3
6	3	7.0
Athletic		
0	15	34.9
1	7	16.3
2	5	11.6
3	5	11.6
4	4	9.3
5	4	9.3
6	1	2.3
7	2	4.7
Academic		
0	16	37.2
1	10	23.3
2	7	16.3
3	3	7.0
4	1	2.3
5	1	2.3
6	1	2.3
7	3	7.0
8	1	2.3

n = 43

Note: Social, Athletic and Academic acceptance were based on peer nomination of who a child would like to sit by at lunch; with whom a child would like to play on a sports team; and whom a child would choose to work with on a science fair project, respectively.

Table 5

Pearson's Correlations Among the CDI, BASC-TRS-Depression Scale, Peer Rejection, Combined Peer Acceptance, and GPA Comparisons

Measures	BASC-TRS-DS	Combined Peer Accept.	Peer Reject.	GPA
CDI	.734**	-.306*	.345*	-.322*
BASC-TRS DS		-.318*	.274	-.282
Combined Peer Accept.			-.271	.254
Peer Rejection				-.309*

n = 43

Note: CDI = Children Depression Inventory, BASC-TRS, DS= Behavior Assessment Scale for Children-Teacher Rating Scale (Depression Scale), Peer Rejection = Peer nomination for Rejection, Combined Peer Acceptance = Peer Nomination for Social, Academic, and Athletics Arena, and GPA = Grade Point Average as a measure of academic achievement

** $p < .01$. * $p < .05$ (2- tailed).