DEPRESSION AND THE MAGNET SCHOOL ADOLESCENT: 
IDENTIFICATION, PREVELANCE, RELATED CHARACTERISTICS, AND 
DIRECTIONS FOR TREATMENT

DISSERTATION

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The Degree Doctor of Philosophy in the Graduate 
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By

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ABSTRACT

This study was designed to address multiple questions surrounding the broad topic of adolescent depression in magnet school adolescents. All participants in this study were drawn from a magnet high school for academics/talented arts in a metropolitan Louisiana city. This study therefore adds to the limited base of literature which addresses the prevalence of depressive symptoms in this population. The relationship between depression and numerous factors was examined as well, including locus of control, grade point average, race, gender, socioeconomic status, and school attendance. In addition, the study investigated the degree to which adolescent self-reports and teacher ratings agree in this population, while also looking at personal and professional characteristics that may have influenced teacher ratings.

Results from this investigation revealed high rates of depressive symptoms in this population, with 29% of student self-reports and 24% of teacher reports suggesting significant levels of depression. Levels of agreement between the student and teacher forms were low. The relationship between depression assessments and scholastic correlates (attendance, G.P.A.) failed to meet the criteria selected for statistical significance (alpha=.01). Stronger correlations were observed between depression self-assessments and psycho-social factors (stressful life events and locus of control). An
analysis of teacher assessments indicated that significant between-group variations existed when teacher rating forms, divided by gender and attitude regarding adolescent depression, were compared. Finally, in addition to addressing the primary research considerations noted here, the results section of this study presents findings which suggest that short term, school-based counseling may be an effective means for reducing symptoms of depression in adolescents.
DEDICATION

This dissertation is dedicated to my parents, Bert and Barbara Manning, whose enduring love and support made this project possible.
I would like to thank the following individuals:

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CHAPTER 1

INTRODUCTION

Of all the momentous tasks to which the United States of America has aspired, perhaps none have been so great or revolutionary as the development of a universal public education system. For many years a democratic ideal, this mission was codified by the Individuals with Disabilities in Education Act of 1975. This law mandated a free and appropriate education for all children, regardless of what needs a child may have, and led to the proliferation of what is known as special education in American schools. Protected but infrequently served within this framework are students who suffer from internalizing psychological disorders such as depression. Depression, a disorder with a relatively high prevalence and the potential to severely undermine an adolescent’s academic potential, is a condition that is largely ignored by the schools.

While the responsibility of the educational system to address the pressing affective needs of certain students remains open to ideological debate, empirical evidence of related negative academic ramifications is indisputable. Depression affects multiple areas of functioning in adolescents, including behavioral, emotional, somatic, and
cognitive domains (Reynolds, 1990). A disturbance in any one of these domains may significantly impede academic achievement; impairments in multiple areas simultaneously can be devastating. It is with these points in mind that this study will further investigate the need, and practical strategies for, the identification of depression in adolescents.

It could be argued that schools ignore their mandate to meet the unique needs of children who are experiencing depression because the nature of the disorder, along with society’s perceptions of adolescence, make depressive symptoms easy to overlook. The behavior of adolescents who experience internalizing disorders is less likely than other problematic conditions to raise significant concerns. Whereas teachers consistently rank problems with discipline as the number one or two problem interfering with the educational process (Walker, Greenwood & Terry, 1994), internalizing behaviors garner far less attention. This is not to say that depression in schools has been completely overlooked. Approximately 10 years ago, a rise in interest and publication on the problem of depression in students was seen in the school psychology literature. At that time, it was noted that school psychologists may be the most appropriate school based professionals for identifying students who are experiencing depression (Reynolds, 1990). However, a decade later, little if any evidence exists to suggest that school psychologists have been effective in this endeavor.

This failure may, in part, be traced to the limited contact that professionals in this discipline have with the general student population. In light of the 1 to 2000 ratios (or greater) frequently seen in this field, the likelihood of a school psychologist identifying
depressed students without the use of systematic screening procedures seems unlikely. Unfortunately, the educational system has failed to embrace the multi-stage, school wide screening procedures recommended in the literature. Given this resistance, the most effective and efficient avenues for identifying depression in students must be investigated.

Statement of the Problem

In general, the topic of adolescent depression is one which would benefit from additional research as both educators and mental health professionals attempt to better understand this troubling and not uncommon condition. Even more pressing however is the need to explore the prevalence and effects of depression on populations which researchers have largely ignored, including racial and economic minority groups, and students who are educated outside of mainstream school settings (i.e. magnet school students). The population chosen for this study will help us to better understand these overlooked student groups.

Whereas significant research exists to suggest that depression is a prominent and disruptive psychological condition in adolescents, the educational system has yet to identify appropriate avenues by which these students can be recognized and appropriately served. A potential resource, which has not been adequately investigated, are teachers. Teachers, being the school-based professionals with the most consistent student contact, may be the most appropriate candidates for identifying depression in students. The potential to gain valuable diagnostic information from these individuals has already been
suggested (Blackman, 1995). In addition, various scales exist in which teachers’ ratings are used to help confirm the presence of depression in students whose behavior has already been identified as worrisome. However, the ability of teachers to accurately identify depression in non-clinical populations has not been adequately examined. This study therefore proposes to conduct an investigation of the degree to which magnet high school teachers are able to identify depressive symptoms in adolescents.

Keeping with the overarching goals of identifying, understanding, and assisting students who are experiencing depression, this study also proposes to examine the potential link between depression and the variables of locus of control and stressful life events. Assessing students in these areas may help to identify common characteristics and experiences of students who are affected by depression. Although the literature supports a link between locus of control (LOC) and depression in clinical populations (Hammond & Romney, 1995; Pinto & Francis, 1993; McCauley, 1988), minimal data exists to support such a connection in school children that display depressive symptoms. Even less research is available on the relationship of adolescent depression and the experiencing of stressful life events in school based populations. Results from this study may then help us to identify key factors, both internal and external, which relate to adolescent depression. Finally, the question of what, if anything, schools (and school psychologists in particular) can do to address the problem of adolescent depression is one which lacks adequate research.
Research Questions

The following 10 questions were developed to guide the data collection and analysis for this study on depression and the magnet school adolescent.

1. How does the prevalence rate for significant depressive symptoms in magnet school adolescents compare to the levels seen in other student group?

2. What level of agreement exists between self-reports and teacher ratings of students’ level of depressive symptoms?

3. Do any significant racial or economic group differences exist in student’s self-reporting of depressive symptoms?

4. When divided into groups based on personal (gender, race, attitude) and professional characteristics (years experience, training), do any significant differences exist in the rate at which teachers’ identify significant depressive symptoms in their students?

5. What, if any, school related (e.g. attendance, grade point average) factors correlate with student and teacher ratings of depression?

6. To what degree is exposure to stressful life events correlated with adolescent depression?

7. To what degree is locus of control correlated with adolescent depression?

8. Do any significant gender, economic, or racial group differences exist in students' self-reporting of locus of control?
9. What, if any, school related (e.g. attendance, grade point average) factors correlate with students’ self-ratings of locus of control?

10. To what degree is exposure to traumatic life events correlated with adolescent’s self-reporting of locus of control?

Significance of the Study

The study proposed here has the potential to provide information on a number of issues with particular relevance to the practice of school psychology. In general, the study will add to our understanding of depression in school children. This is seen as important in light of the demonstrated detrimental effects of depression on academics, emotional well-being, and overall functioning. This study has a number of more specific research aims however, as noted by the listing of research questions in the previous section. That list is now be revisited, with the significance of each question noted.

1) How does the prevalence rate for significant depressive symptoms in magnet school students compare to the levels seen in other groups of students?

Student and teacher participants in this study were drawn from a magnet high school for academics and visual/performing arts. Such populations have been almost completely ignored in the school psychology literature. This study will therefore provide information on the prevalence of depressive symptoms in what has historically been an overlooked group of students.
2) What level of agreement exists between self-reports and teacher ratings of students’ level of depressive symptoms?

As the identification of adolescents with depression by the schools is clearly inadequate, this study will help determine whether or not teachers are a viable source for identifying depression in school children. Should this study discover that teachers are able to adequately detect depression in school children, it would lend support to the argument that schools should utilize teachers to help identify this underrepresented population. Such a finding might also suggest that, though teachers are able to identify signs of depression in adolescents, they might not recognize that depressed students should be brought to the attention of appropriate school based professionals (i.e. school psychologists, counselors). On the other hand, a failure by teachers to detect signs of depression could also endorse the conclusions of some previous research (e.g. Reynolds, 1990), which suggested that standardized screenings by trained professionals is a more appropriate means for assessing depression.

3) Do any significant racial or economic group differences exist in student’s self-reporting of depressive symptoms?

The majority of the studies on adolescent depression noted in the school psychology literature are insensitive to issues of diversity, both racial and economic. An understanding of the variables which impact the likelihood of students reporting depression may identify populations which are particularly at-risk and in need of special programming for depression.
4) When divided into groups based on personal (gender, race, attitude) and professional characteristics (years experience, training), do any significant differences exist in the rate at which teachers’ identify significant depressive symptoms in their students?

If teachers are to be considered as a viable means for identifying student depression, potential factors which may increase or decrease a teacher’s likelihood of identifying depression should be investigated. Elements to be considered include gender, race, years of experience, attitude regarding adolescent depression, and training (coursework or otherwise) on the nature of depression in adolescents.

5) What, if any, school related (e.g. attendance, grade point average) factors correlate with student and teacher ratings of depression?

Generally speaking, this topic has received more thorough attention in the literature than have the others outlined here, as the link between depression and negative academic correlates is strong. Therefore, this study will contribute to the existing body of knowledge on this topic, while simultaneously broadening our understanding by incorporating a somewhat unique population of magnet school students. In addition, the bulk of existing literature on the relationship between academics and depression have focused on students with an existing diagnosis. This study will therefore develop an understanding of the academic characteristics of students whose depressive symptoms may have been overlooked.
6) To what degree is exposure to traumatic life events correlated with adolescent depression?

Little is known about the relationship of adolescent depression and stressful life events, particularly in the population proposed for this study. It is possible that certain stressful life events, such as death of close friends/relatives, or personal illness/injury, may be somewhat evident to school personnel. Knowledge of the relationship between stressful life events and depressive symptoms may therefore prove to be an effective means for identifying students who are at-risk for experiencing depression.

7) To what degree is locus of control correlated with adolescent depression?

There is a lack of adequate evidence to demonstrate a relationship between LOC and depression in regular education adolescents. However, enough related studies exist with clinical populations to suggest such a link. Establishing a relationship between these two factors would be significant in both prevention and intervention planning for adolescent depression. In particular, given the call for school psychologists to focus on preventative measures, short-term psycho-educational programs aimed at developing appropriate LOC in students may be an effective way to minimize the development of depression.
8) Do any significant gender, economic, or racial group differences exist in students’ self-reporting of locus of control?

The data on the research question posed here is mixed. Initial norming procedures using the locus of control instrument (Levenson, 1974) employed in this study did not find significant gender differences, and failed to provide any information on economic and racial variables. However, racial differences were identified in a follow up study (Garcia & Levenson, 1975) which examined college students. The answer to this research question will therefore provide valuable information on a topic which lacks clear empirical findings.

9) What, if any, school related (e.g. attendance, grade point average) factors correlate with students’ self-ratings of locus of control?

As with the depression version of this question, research has generally supported a positive relationship between achievement and an internal locus of control. However, research on correlates such as attendance and exposure to recent trauma is sparse or non-existent. Findings from this question will help to determine if addressing a student’s locus of control might have a positive effect on his/her school attendance and performance.
10) To what degree is exposure to traumatic life events correlated with adolescent’s self-reporting of Locus of Control?

The impact of exposure to stressful life events on an adolescent's developing sense of control over their lives has yet to be thoroughly examined. However, given our knowledge of the learned helplessness theory (Schultz and Schultz, 1994), it seems possible that a link between these two variables exists. Data from this study will help to establish a foundation of knowledge for possible future research into this topic.

Related Studies

In light of an extensive preliminary review of the related literature, this dissertation proposal is considered both timely and relevant. A detailed review of the existing literature on the broad topics of adolescent depression and locus of control will be presented in the second chapter of this dissertation. However, several studies which were particularly influential in molding the study outlined in this dissertation will be mentioned here. The population chosen for the study, magnet high school students, represent an almost invisible group in the educational and psychological literature. The absence of empirical data on this population contributes significantly to the importance of this project. One existing study sought to compare levels of depressive symptoms in magnet school and public school students. In *Self destructive behavior in public school students* (Ward, 1992), a researcher developed instrument was utilized and found that middle school students from public schools reported significantly greater levels of depression (as well as more family conflicts, suicidal ideation, suicidal threats and
attempts, substance abuse, and runaway behavior) than did their magnet school peers. While this was an important piece of research, it failed to explore the experience of high school students, for whom the pressure for academic success would presumably be greater than for their middle school counterparts. And while the research outlined here will did not incorporate a second population of public school students, existing studies on the levels of depressive symptomology found in various student groups (i.e. regular education, learning disabled, emotionally disturbed) can be utilized as a basis for comparing the results of this magnet school study.

Two studies in particular helped to mold the teacher assessment portion of this project. The article *Relative prevalence and correlates of depressive characteristics among seriously emotionally disturbed and nonhandicapped students* (Cullinan, Schloss, & Epstein, 1987) investigated the educational and behavioral correlates of depression. Specifically, classroom teachers completed a depression inventory on their students, while also rating those students on 9 variables of student functioning. This study was important in that it identified characteristics and behaviors associated with depression (as assessed by educators) in school children. However, a weakness in this study was its failure to utilize student self report measures for identifying depression. Therefore, the study could not say with any degree of certainty that teachers identified as depressed students who would rate themselves as such. This limitation was noted in the study, as the authors acknowledged “wondering whether results would have been the same if depression were measured through self reports, target-behavior recording, or other modes (p.96).” The study proposed here seeks to address this limitation by directly investigating
the agreement between teachers’ ratings of a student’s level of depression, and the level of depression self-reported by the student.

A study conducted by Lebrub (1996) most closely resembles the teacher component of this study. In *Depression in the classroom: Can teachers identify depressed students in a middle years school*, students from one school in grades 5-8 completed the *Children’s Depression Inventory* (Kovacs, 1991), while their teachers completed a researcher-developed instrument to identify depressed students. Teachers correctly identified as depressed between 37% and 66% (scores reflect grade level means) of students who identified themselves as such. While interesting, their study did not allow teachers to utilize a diagnostic instrument with established reliability and validity, and it will be interesting to see if the results are replicated with the use of such an instrument. In addition, the study was conducted in a single middle years school outside of the United States (Manitoba, Canada). Therefore, the results of that investigation should not be generalized to dissimilar populations. Furthermore, a more elaborate study conducted with the population suggested here would allow for an investigation into racial and socioeconomic variables, which were not included in the Lebrub study. Finally, the researcher plans to include students above grade level 8.

The locus of control component of this study was incorporated in the hopes of better understanding the characteristics of depressed students who have been overlooked by our educational system. A direct relationship between depression and an external locus of control in clinically depressed adolescents was observed in the study *Cognitive factors contributing to adolescent depression* by Hammond and Romney (1995).
However, such findings have not been replicated in school based studies. The relationship between locus of control and depression is significant in that multiple studies have shown the effectiveness of attribution retraining on the development of an internal locus of control (Shulte, 1998; Benson & Deeter, 1992). As treating a complex internalizing disorder may seem too unwieldy a task for many school based mental health professionals, psycho-educational interventions aimed at developing an internal LOC may be an appropriate school based approach for remediating or preventing depression.

**Limitations of the Study**

Throughout the introduction to this study a popular term, which has been liberally utilized, is depression. This is without question an overstatement, as the identification of depression is a complex, clinical task, which should only be undertaken by appropriately trained and licensed individuals. Furthermore, the instrument selected for measuring depression in this study “cannot be used as the sole diagnostic criteria for depression or anxiety (Brooke, 1995, p.162).” However, a comprehensive psychological assessment of all students in this study, or even those students whose scores on the ratings used here suggest the presence of depressive symptoms, is beyond the scope of this project. Therefore, findings in this study generalize to magnet school students expressing symptoms related to depression, rather than to students who have met the diagnostic criteria for clinical depression.

One valuable component of this study is the collection and analysis of data which suggests the degree to which teachers are able to identify significant levels of depressive
symptoms in students who are reporting significant levels as well. However, an inherent limitation in such an investigation is that the extent to which students are accurately and truthfully completing the distributed rating scale cannot be verified. Therefore, it will not be possible to say with any certainty that teachers’ assessments of depression in their students are accurate or inaccurate.

Though it could be argued that locus of control is a less complex variable than depression, the assessment of this construct raises concerns. In particular, the selection of any instrument could be disputed, given the findings of a recent study. Results reported in *Confirmatory factor analyses of seven locus of control measures* (Hau, 1990) failed to gain support for a single factor model; rather, the findings indicated that the seven measures evaluated were not measuring the same construct. Therefore, any interpretation of the correlations between depression and locus of control may be clouded by the difficulties in establishing what exactly the chosen LOC instrument is measuring. In addition, no recent, published norms exist for a regular education adolescent population such as the one to be examined here. In light of this, local norms will be developed and used, with consideration of those already available from other studies (Levenson, 1973; Levenson, 1975),

Finally, generalization of the results from this study to other settings is compromised given the nature of the sample population. All students selected from this study came from a magnet high school in a metropolitan region of Louisiana. This particular public high school was designed to attract high achieving students from around the district. One benefit of this population is the mixture of race and SES of the students,
who are drawn from a larger geographic area than normal. While use of this population will provided insight into a subset of students (magnet school adolescents) who thus far have been overlooked by researchers, any extrapolation of the findings to students in non-magnet schools must be done with extreme caution.

**Definitions**

**Depression:** An internalizing affective disorder, with a relatively high prevalence rate, which in adolescents commonly manifests in symptoms such as sadness, loss of interest and enthusiasm, irritability, and impairments in interpersonal relations/instrumental activities.

**Depressive Symtomolgy:** Those symptoms most commonly associated with clinical depression.

**Interpersonal Life Stress:** Difficult life events involving relationships (such as those with friends, family members, and romantic partners) with the potential to prompt anxiety, depression, or other negative emotions.

**Instrumental Life Stress:** Events stemming from difficulties in work or school which may result in measurable financial, physical, or scholastic difficulties.

**Locus of Control:** A personality construct which helps to explain the emphasis placed on factors, both internal and external, which an individual feels are responsible for the events and outcomes in his or her life.

**Chance Control:** The notion that events and outcomes in an individual’s life are the result of random occurrences.
**Internal Control**: The notion that events and outcomes in an individual’s life are the result of a person’s attributes and actions.

**Powerful Other Control**: The notion that events and outcomes in an individual’s life are determined by the actions of those who wield power over that individual.

**Magnet School**: Public schools which develop one or more focus areas (i.e. general academics, computer instruction, performing arts) in an effort to attract students who share common attributes, interests, and/or skills.

**Suicidal Ideology**: The presence of suicidal thoughts or behaviors, generally expressed on a continuum.

**Organization of the Study**

This introductory chapter has served to introduce the reader to some of the issues surrounding the topic of adolescent depression, including: manifestations, related problems, and the poorly defined responsibility and uncoordinated efforts by public schools to address the problem. In addition, the specifics of this research/intervention study have been outlined, including the primary research questions. Chapter two reviews scholarly research, historical and current, as it applies to the topic of adolescent depression. This examination focuses on literature which is germane to the ten specific questions posed in this introduction. Chapter three provides a description of the students and teachers who participated in the study, characteristics of the chosen site, and includes a discussion of the various instruments used for data collection. In addition, the procedures, safeguards, and timelines used for collecting and analyzing data in this study
are detailed. Utilizing the research questions posed in this first chapter as a framework, chapter four presents findings from the data collection and results from the various analyses. Finally, chapter five allows the author a chance to draw conclusions from this study and to suggest future directions for research.
CHAPTER 2

REVIEW OF LITERATURE

Part I) Depression

In the realm of affective disorders, depression is among the most common of presenting problems. It has been estimated that between 8-18% of the general population will experience at least one clinically significant episode of depression in their lifetime (Hammon & Rudolph, 1996). Even greater, and less well documented, are those individuals who suffer at sub-clinical levels. Depression, though it is most often studied in adults, frequently affects adolescents. Recent studies suggest prevalence rates ranging from 6-12% for Major Depressive Disorder in adolescents (National Institute for Mental Health [NIMH], 2000; Reynolds, 1990; Robertson & Simons, 1989; Deykin, 1987). Researchers in the area of adolescent depression typically note that the disorder is under-diagnosed in this age group (Blackman, 1995; Reynolds, 1990), with serious consequences for school and related activities.

Though this review notes debates surrounding multiple areas of depression as it applies to adolescents, a degree of consensus does exist on certain issues. While not
completely clear, definite gender trends are evident in the literature. Depression is commonly thought to be more prevalent in females, and after the onset of adolescence, females experience depression at a rate twice as high as males (Hammen & Rudolph, 1996). However, some research has suggested a higher rate of occurrence in males during the period of early adolescence (Lebron, 1996). In reviewing the literature in this area, Hammen & Rudolph (1996) contend that the only real debates surrounding gender are when the differences occur and why. The lack of understanding of the “why” portion of the gender question speaks to the need for continued study on sex differences in depression.

Much less understood than gender patterns is to what degree, if at all, race and depression are related. The uncertainty surrounding this issue certainly is linked to the paucity of research on the topic. Those who have attempted research in this area note the lack of empirical findings upon which to build their own research (Sistahspace, 2001). Studies which are racially sensitive have found minority females to have the highest prevalence rate (Weinberg, et. al, 1995; Sistahspace, 2001). Two competing hypotheses tend to arise when the relationship between race and depression is studied. One is that any differences between cultural groups lie in ethnic differences. The other suggests that observed differences may be more reflective of class issues than variables related to ethnicity. Thus far, the limited research on this topic has not provided a clear or even likely answer to this intriguing and socially sensitive topic.

As mentioned in the previous paragraph, the possible relationship between depression and socioeconomic status is one which has intrigued a number of researchers.
However, should the literature eventually support a consistent relationship between adolescent depression and socioeconomic status (which it thus far has not), such a finding may not be particularly helpful in understanding the development of the disorder in this age group (Rudolph & Hammond, 1996). This is due to the countless factors associated with social class, including issues of child rearing, environmental stress, nutrition, and discrimination. Research that attempts to understand differences in depression among class lines must then consider other potentially related constructs. One such variable, locus of control, will be discussed later in this review.

Developing a knowledge base which is geared towards better identifying and treating adolescent depression is needed in light of the severe ramifications of the disorder. Depression has been shown to negatively impact a range of functioning related to success in school. This includes impaired social adjustment, school phobia, and lowered academic achievement (Maag & Rutherford, 1988). A more detailed investigation of these concerns will be presented later in this chapter. Given these problems one might expect the field of school psychology to demonstrate considerable interest in adolescent depression. However, the 1,296-page manual Best Practices in School Psychology – III (Thomas & Grimes, Eds., 1995) included no chapters specifically aimed at this topic. A similar oversight was noted in Exceptional Children: An Introduction to Special Education (Heward, 1996), which failed to address internalizing disorders in its discussion of severe emotional disturbances. The lack of attention paid by school psychologists to this serious affective disorder not only inhibits
the development of knowledge on the subject, but indirectly supports the outdated notion of depression as a normal and transitory period of adolescence.

Despite the risks which adolescents have for developing depression, collectively this group has been overlooked by psychological researchers. This is due in part to the image which many have of the turbulent lives and fragile emotional states ascribed to adolescents. “…many social scientists viewed adolescence as a highly stressful, unstable period of the life cycle. Hence, they considered depressive symptoms to be a relatively common and normal aspect of adolescent development (Robertson & Simons, 1989, p.129).” In years past those who did support the existence of depression in this age group believed that the symptoms manifested in a manner not seen in adults, giving rise to the notion of masked depression (Reynolds, 1985). Though variations do exist in the manner which teens and adults express their symptoms, the concept of masked depression has not found empirical support (Hamman & Rudolph, 1996). Without disputing the idea that adolescence is difficult and confusing for many, research does suggest that most teenagers do not experience severe mood disturbances, feelings of alienation, or behavioral instability (Sarvet, 1998). Mental health professionals now accept that depression is not merely a transitory phase for many teens, but rather is a serious mental health condition which warrants both investigation and intervention (Hamman & Rudolph, 1996; Robertson & Simons, 1989).
Symptoms and Diagnostic Criteria

The DSM-IV recognizes two types of unipolar clinical depression: A Major Depressive Disorder (MDD) and Dysthymic Disorder (American Psychological Association, 1994). MDD is diagnosed when an individual exhibits five of nine criterion behaviors, one of which must be loss of interest or pleasure in most or all activities (to at least a moderate level) over a two-week period. Dysthymic Disorder is diagnosed when fewer and less severe symptoms are noted, but a prevailing depressed mood is present for most of the day during a period of at least two years.

A less technical but reasonably objective list of criteria for the assessment of depression in adolescents was proposed by Birleson (1980). These include:

- Evidence of recently expressed unhappiness, sadness, misery or weepiness.
- History of behavioral change lasting at least two weeks, but less than a year.
- Evidence of recent impairment in social relationships and/or decline in school performance.
- The presence of two or more of the following: sleep disturbance, appetite disturbance, loss of usual energy and interest, reduction in activity, expression of self-depreciating ideas, suicidal threats or behaviors, increased irritability, new somatic complaints, wandering behavior, depressive delusions and hallucinations (p.76).

Professionals who seek to identify the presence of depression in adolescents must be prepared to acknowledge and interpret symptoms that are not typically associated with
adult depression. Symptoms of depression in teenagers may include increased sleep, irritability (rather than sadness), and mood reactivity (Sarvet, 1998). William Reynolds, a researcher frequently cited on this topic in the school psychology literature, argues that depression in adolescents is expressed as a cluster of symptoms. These may include anhedonia, dysphoria, low self-esteem, social withdrawal, fatigue, impaired school performance, crying spells, irregular patterns of sleeping/eating, and self-destructive cognitions and behaviors (Reynolds, 1990).

**Etiology**

Adolescents may find themselves at a heightened risk for the development of depression for a variety of reasons. For instance, clear scientific evidence supporting a familial link for depression suggests that adolescents of depressed adults are at a greater risk for developing the disorder than are teenagers whose parents are not depressed (Cantwell & Baker, 1991). More specifically, children of depressed parents are 2-3x’s more likely to develop MDD than are peers who do not have parental sufferers (Hammen & Rudolph, 1996). This proportion suggests that roughly 30-40% of depressed youths will have parents with the same disorder (Weinberg, Harper, Emslie, & Brumback, 1995). Another way to frame this is that 40% of children of depressed parents will experience a period of depression by their 20th birthday (KLIS, 2001). It has also been reported that, as opposed to during the earlier years of childhood, correlations between parental and childhood depression are strongest during adolescence (National Institute of Mental Health, 2000). Though a relationship clearly exists between parental depression
and affective disorders in their children, it is not clear whether this link is primarily genetic or psychosocial in nature.

Two prevalent psychosocial theories for the transmission of depression are Cognitive and Family theories (Schwartz and Schwartz, 1993). Even with the evidence supporting a genetic link, such theories are important. This is due to the fact that depression typically won’t manifest without the presence of environmental stressors (Weinberg, et al, 1995). In terms of family structure, attachment theory suggests that depression (and other psychological ailments) may result from the absence of a healthy bond between an infant and caregiver. This insecure attachment places the infant at a greater risk for future adjustment problems. Other relevant studies note that parental loss and rejection during childhood helps predict depression in later adolescence (Robertson & Simons, 1989).

Cognitive theories, pioneered through the work of Aaron Beck (1967), suggest that the manner in which an individual processes information can serve to predispose that person to depression. Specifically, an individual may have negative automatic thoughts which lead him/her to interpret situations, conversations, and events in a depressing manner. This conceptualization has been challenged in recent years, as multiple studies cited by Robertson and Simons (1989) suggest that though adolescents often possess negative views of themselves, these distortions do not carry over into their world view. However, even if some disagreements exist on the finer points of the theory, CBT remains one of (if not the) most popular therapeutic strategies for the amelioration of depression.
Closely linked to the cognitive-behavioral theory of depression is the notion that depression is not a condition, but rather a behavior which is chosen by a specific individual. Theorists who subscribe to this view argue that individuals are choosing to depress, rather than describing them as suffering from depression. Active proponents of such a position include Albert Ellis and William Glasser. The innovator of Reality Therapy, a mode of counseling based on Choice Theory, Glasser (1976) argues that depression, like all psychological conditions which are classified as disorders, is in fact nothing more than an individual choosing a maladaptive coping strategy in response to challenging life situations. This choice is made because depression may seem easier than attempting more adaptive behaviors. Therefore individuals who choose depression do so because they believe it will be easier to be depressed than to face the troubling issues in their life. When conceptualized in Reality Therapy the label of depression can in fact impede the progress of an individual, as their affliction rationalizes the decision not to choose more adaptive behaviors. Glasser (1965) and other practitioners of Reality Therapy (Wubbolding, 1988) have reported success in applying this approach with adolescents who are choosing to depress.

A similar view is proposed by the father of Rational Emotive Behavior Therapy (REBT or RET), Albert Ellis. Ellis also argues that individuals choose to depress; however, this is closely tied to unrealistic expectations which they have for themselves and the world around them (Sharf, 1996). RET differs from Reality Therapy by implicating irrational thoughts as leading to depression, while the latter approach focuses on the failure of an individual to achieve basic needs and wants (Wubbolding, 1988).
Approaches such as these can be seen as empowering to the person who is diagnosed. In addition, the acceptance of either theoretical model by a therapist has considerable ramifications for the course of treatment. Both RET and Reality Therapy are promising approaches for the treatment of adolescent depression, and will be examined in greater detail in the intervention portion of this chapter.

Related Disorders & Deficits

Complicating the assessment of depression in adolescents is the high rate in which this disorder appears in conjunction with other psychosocial maladies. In the field of adolescent psychotherapy, a common dual diagnosis is substance abuse and depression. Recent research has suggested that up to 25% of adolescents seen for depression will also be struggling with issues related to substance abuse (McWhirter, et. al., 1998). Other studies have found that adolescents who report alcohol abuse are four times as likely to have a history of Major Depressive Disorder (MDD) as those subjects who are not abusers (i.e. Deykin, 1987). Rates of comorbidity are generally higher in females, as female adolescent substance abusers are six times as likely to have experienced MDD as non abusers (Deykin, 1987). This trend is similar for drug abusers, who are 3.3 times more likely than non-abusers to have a history of MDD (Deykin, 1987). Due to the relative frequency of these problems, counselors working with adolescents must be prepared to understand, appropriately diagnosis, and treat clients who present with either or both depression and substance abuse.
Anxiety, another high frequency internalizing disorder in adolescents, is found in 30-75% of students who exhibit MDD (Sarvet, 1998). The particular challenge raised by this high comorbidity rate is in the differential diagnosis of these disorders. Traditional measures of assessing global levels of anxiety and depression display correlates in the .60-.70 range (Laurnet & Ettelson, 2001). As the accurate differentiation between the disorders of anxiety and depression is essential to appropriate therapeutic planning and implementation, the diagnosis of either of these disorders must be approached with caution. In addition to substance abuse and anxiety, depression is frequently diagnosed in conjunction with a variety of other disorders. Significantly correlated but less highly comorbid diagnosis include conduct disorder, oppositional defiant, and ADHD (Hammen & Rudolph, 1996).

Though depression is often difficult to detect in light of the internalizing nature of the disorder, untreated depression can eventually result in behaviors which cannot be ignored. The most disturbing examples are suicide and aggressive violent outbursts. Suicide is the third leading cause of death in youths aged 15-19, surpassing cardiovascular disease and cancer (Blackman, 1995). Adolescents with MDD are seven times more likely to attempt suicide than are their non-depressed peers (KLIS, 2001). The relationship between violence and depression is one which has long been recognized by psychology. In reviewing this topic, Laurnet & Ettelson (2001) noted that the psychoanalytic community has long held the idea that depression is essentially anger directed towards the self. Beck’s CBT theory generally supports such a notion, though it conceptualizes the relationship in cognitive-behavioral terms. The limited literature on
adolescent depression has reported that the disorder may manifest itself via acting out behaviors not typically observed in adult depressives (Hammen & Rudolph, 1996). The high profile cases of school violence in recent years serve as a vivid reminder of the need to address the affective state of adolescents.

Difficulties in school are a common feature of depressed students. Depression has been implicated as a leading cause of failure in school for young people with learning disabilities (Weinberg, et. al, 1995). However, it is not always possible to tell whether a student’s depression led them to perform poorly, or that repeated educational failures was a trigger for the depression. Regardless of the pattern, researchers have consistently found a relationship between depression and low achievement (i.e Cullinan, Patrick, & Epstein, 1997; Maag & Rutherford, 1997). Difficulties achieving in school is not surprising, given symptoms of depression such as loss of energy, psychomotor retardation, difficulty concentrating, and irritable mood (NIMH, 2000). The relationship between depression and school problems ranges beyond what appears on the student’s report card. Frequent absences are common as well, and may be related to school phobia (Weinberg, 1995), or the somatic complaints associated with the disorder. For instance, 40% of adolescent girls with depression report experiencing severe headaches (KLIS, 2001).

Research has suggested that, in general, special education students are more likely to experience depression than are their peers in regular education. A study by Magg and Behrens (1989) concluded that a substantial number of students with diagnoses of LD and SED exhibited moderate to severe levels of depression. In addition, no significant
difference was found in the prevalence rate among these two disability categories. Other researchers have placed the rate of depression in LD students who are failing in school at an astounding 60-80% (Weinberg, 1995). Though preliminary findings such as these are available, the existing literature on depression in special education students is extremely sparse.

Depression and Life Stress

That adolescence has the potential to be a very stressful period is indisputable. For starters, some common teen stressors are directly related to developmental level. In addition, teens also frequently experience life events which are difficult by any standards. In short, a period of depression by an adolescent may in fact be a predictable and even reasonable response to a difficult life event. In a review of data from an unpublished study of Minnesota teenagers, eight life events were identified as being most frequently cited by youths as distressing events they’d experienced in the past six months (Walker, 1997). These included:

1) Boyfriend/girlfriend break-up
2) Increased arguments with parents
3) Trouble with brother/sister
4) Increased arguments between parents
5) Change in parent’s financial status
6) Serious illness or injury/death of family member or loved one
7) Trouble with classmates

8) Trouble with parents

In addition, the author noted results from her own informal stress survey of 60 high school students. This survey added to the above list such events as pressure to succeed academically and/or athletically, personal financial concerns, and problems with teachers. In assessing and treating adolescent depression it is therefore necessary to determine whether the adolescent’s negative mood at the time of assessment is a potentially transitory reaction to a negative life event, or rather the result of a general propensity to view themselves, the world, and others in a negative light.

Another exploration into the impact of stressful life events on teens utilized a 25 question instrument which explored six broad categories, including death, separation, trouble (school/legal), finances, parental conflict, and personal injury (Ge, Lorenz, Conger, Elder, & Simmons, 1994). An interesting finding from this study, which was noted in the authors’ recommendations for future research, suggested that females in the study appeared to be more distressed by life events which had interpersonal ramifications. This particular hypotheses will be incorporated into the research study detailed in this dissertation.

Identifying and Serving Students with Depression

The Individuals with Disabilities Act (IDEA) of 1997 guarantees a free and appropriate education to all American schoolchildren, regardless of their handicapping
condition. One of the 12 disability categories recognized by IDEA is that of severely emotionally disturbed (SED). Infrequently used, this category typically is invoked to serve students who are disruptive and aggressive (Cullinan, 1987; Kauffman, 1985). However, the SED category also provides for students who, among other behaviors, display a “general pervasive mood of unhappiness or depression.” As of the early 1990’s, less than 1% of all students enrolled in public schools were served under the SED category (U.S. Department of Education, 1991). Furthermore, only a fraction of this 1% of students are served due to an internalizing disorder such as depression (Fornes, 1992). This ratio persists despite the fact that children labeled as SED are much more likely than the general school population to exhibit depressive characteristics (Cullinan, et al, 1987; Maggs & Behrens, 1989). Findings such as these suggest that more attention needs to be focused on depression as a characteristic in SED students. In addition, when the reported prevalence rates of 6-12% for Major Depressive Disorder in adolescents is considered (Deykin, 1987; etc), the number of students served via the SED label appears to represent a striking under-representation of children with depression in the special education system.

In a sense, this oversight by the educational system is understandable. Depression can be a difficult disorder to identify, given that its symptoms may be less pronounced and observable than other emotional disorders (i.e. conduct disorder). Whereas teachers are able to identify children with profound learning and externalizing behavior problems, the depressed child, who exhibits “relatively covert, often unobservable symptoms (Reynolds, 1990, p.140)” is less likely to grab the teachers’ attention. In light of this, it
has been suggested that educators need to be trained in the identification of depressive characteristics, as well as the various manifestations and consequences of the disorder (Lebron, 1996). Others have argued the need for inclusive school-wide assessment by school psychologists or other school based mental health professionals (Reynolds, 1990).

At this point in time, we know very little about the ability of regular education teachers to identify depression in their students (Molins, 1999). However, one study found that teachers with more experience were better able than their less experienced peers to identify depression (Lebron, 1996). A similar lack of knowledge regarding special education teachers ability to detect depression exists, which is troubling given the higher rates of depression seen across various special education categories (Magg & Behrens, 1989). This oversight in the literature is significant, as teacher referrals are a primary vehicle in selecting students for special education assessments.

In light of the findings reported above, it has been suggested that school psychologists may be the most appropriate agents to identify and serve depressed children in the school setting (Reynolds, 1990). However, while school psychologists may have the level of expertise required to appropriately identify depressive symptomology in students, the low number of students being served by virtue of depression indicates that currently this approach is not adequate. As it stands, students must typically wait and have depression identified by an outside agency before receiving appropriate services (Maag & Rutherford, 1987). When the difficulties by the schools to identify depressed students is considered, the argument can be made that the provision of
such a service to children and adolescents should be an important part of the school psychologist’s duties.

In order to meet such an expectation, a multi-stage screening process is recommended by William Reynolds (1990). Although clinical interviews are considered the most sensitive means for assessing depression (Puig-Antich & Gittelman, 1982), the widespread use of such a technique with the general school population is impractical. Rather, a school wide screening using a brief instrument is a more feasible approach. Screenings conducted in this manner typically result in identification rates of 10-20%. A follow-up screening with students who meet criteria in the initial wave is then recommended. Stage three would then involve a clinical evaluation of students who identified themselves as depressed on both ratings. Such approaches as these are seen as valid, as failure to use some sort of systematic assessment procedure appears to result in undetected adolescent depression. However, convincing schools to devote time and other valuable resources to such projects can be a major stumbling block to identification efforts.

Multiple problems exist with the standard behavior rating forms typically used as part of an evaluation for potential special education placement. Popular scales such as the Achenbach’s Child Behavior Checklist (Achenbach, 1991) lump affective concerns into a catch-all “internalizing” category. Research on the effectiveness of such approaches is, at the very best, limited. One of the few such studies found teachers identified significantly fewer internalizing behaviors than the students themselves.
reported (Youngstrom, Loeber, & Stouthamer-Loeber, 2000). That study differed from the one outlined here in that it used 7th grade males exclusively.

**Interventions for Depression**

Though the focus of this research study is the identification/assessment of depression in adolescents, the utility of school based counseling for the alleviation of depressive symptoms in adolescents is also addressed. This is warranted in light of the responsibility of school psychologists to not only identify students requiring special services, but to be active in service planning and, when appropriate, implementation. The treatment of depression in adolescence is not an undertaking which should be taken lightly, nor by individuals without the proper training. Inappropriate and ineffective treatment may in fact increase levels of depression in youngsters (Reynolds, 1990). And the use of antidepressants (which will not be addressed given the lack of prescription privileges afforded to school psychologists) are strongly recommended when psychiatric symptoms exist, or when adaptive functioning is severely compromised (Sarvet, 1998). Fortunately, research has suggested the viability of psychological treatment approaches for the alleviation of depression (e.g. NIMH, 2000; Reynolds, 1990). In light of this, a brief overview of appropriate school based interventions will be discussed here.

Though many conceptualizations exist for the origins of depression, and numerous suggestions for treatment approaches have been offered, a general three-phase approach to the treatment of depression is seen in most therapeutic strategies. This progression was outlined in *Depression: Theories and Treatment* by Schwartz &
Schwartz (1993). In the beginning phase an immediate decision must be made in regards to the severity of the situation. A diagnosis should be conducted, and decisions about the potential need for hospitalization and medication made by the appropriate professionals. Also in the beginning phase measures should be taken to stop the downward spiral of depression, and priorities for treatment should be established as well. It has been suggested that during this phase the adolescent should be informed about the nature, course, and treatment of this disorder (Weinberg, 1995). Of course, the theoretical orientation of the professional involved in treatment will have a dramatic impact on how the disorder is framed. It is during the intermediate phase that the bulk of therapy is conducted. Issues which are typically addressed issues include low self esteem, problems with rage, and refocusing attention to external interests. Finally the termination phase should be a therapeutic process and not an abrupt end to treatment. During this time the client should be taught to distinguish between normal and clinical depression, and support should also be provided in accepting the gains made in therapy. Due to the likelihood of relapse (70% of adolescents with MDD relapsed within 5 years; 15-23% in first year), a long term component, which addresses relapse prevention, should be included (NIMH, 2000; Davidson, 1976).

Approaches to the psychological treatment of depression which may have the greatest utility for school based psychological service providers are those which emphasize behavior change. Most schools are unable to provide long term interpersonal counseling for their students. Treatments which are short term, potentially applicable in group settings, and focus on developing or restoring behaviors which promote success in
schools are recommended. In light of these parameters, behavior therapy, cognitive-behavioral therapy (CBT), reality therapy, and rational emotive behavior therapy (RET) are considered appropriate choices.

In a behavioral therapeutic approach, the initial phase of therapy requires tremendous structure. This is necessary to ensure a clear understanding of expectations, goals, time commitments, etc. Before the bulk of treatment is to begin, a hypothesis should be developed regarding what behaviors are currently maintaining the clients depression, and what steps should be taken to alter those behaviors. Davidson (1976) suggested that a clear behavioral diagnosis be made, utilizing graphs, charts and behavioral terms to clearly delineate treatment procedures and goals. The use of a contract is encouraged as well. When entering the treatment phase, it is important to remember the underlying assumption of behavioral therapy, which is that the restoration of an adequate level of reinforcement is crucial (Davidson, 1976). This is typically achieved by focusing on the frequency, quality and range of patient interactions and social activities. A focus on behavior is crucial, as depressed clients tend to engage in relatively few activities, and even fewer which are considered pleasurable (Davidson, 1976). In adolescents, the onset of depression is often linked to a withdrawal from school, athletic, and social activities. And as the risk of relapse into depression is so great, follow-up services are recommended as a normal course of therapy.

Of all the approaches to treating adolescent depression, Cognitive-behavioral therapy (CBT) is probably the one which can boast the most impressive body of empirical evidence (NIMH, 2000). This approach is based on the idea that distortions in
an individual's view of themselves, the world, and the future lead an individual to become depressed. CBT is educational in the sense that it teaches clients to identify and change these distortions. This approach deserves consideration by individuals planning to treat depressed students in the schools because of its efficiency and proven utility.

The creator of CBT, Aaron Beck, originally presented his approach as a model for the treatment of depression (1967). Since that time CBT has become a guiding force in efforts to assess and treat depression. In the area of Assessment, the Beck Depression Inventory is a very popular instrument which utilizes a CBT conceptualization of depression. Other scales, such as the Kovac’s Child Depression Inventory and the Achenbach behavior rating scales are significantly influenced by the work of Beck. Treatment approaches for depression in CBT generally focus on dismantling the specific cognitive distortions, such as catastrophizing and dichotomous thinking, which are maintaining a client’s depression (Sharf, 1996). Application of these principals to the treatment of depression has resulted in an impressive body of empirical research (i.e. Robinson, Berman, and Neimeyer, 1990).

The concept of depression as a choice in Glasser’s (1965) Reality Therapy approach to treatment was discussed previously in this review. This theory argues that all humans have five basic needs which they are always striving to fulfill. These efforts may or may not occur consciously. The needs include power, love and belonging, freedom, fun, and survival. The last of these is mostly biological in nature and, if not threatened, rarely drives behavior. A failure to meet needs in one or more of these areas may lead an individual to choose maladaptive strategies for meeting their goals. Depression provides
an excellent example of this process. For whereas depression is often synonymous with loneliness, the attention which a person receives as the result of choosing this disorder may actually fulfill their belonging needs. Though this behavior may bring short term satisfaction, the long term costs of maintaining the behavior are great.

Conducting Reality Therapy begins with asking the client what they want. For our purposes, this want could be to no longer feel depressed. The adolescent would then be asked to evaluate the choices they are making, to determine if it is an effective means of getting what they want. If not, a cooperative effort to develop more appropriate behavior plans is undertaken. Reality therapy is appropriate for schools because if its brevity, simplicity, and applicability to any disorder. In addition, learning and taking to heart the tenets of reality therapy may be an effective means of promoting the development of a positive, internal locus of control.

The final approach to the treatment of adolescent depression to be noted in this review is Person-Centered Therapy, pioneered by the work of Carl Rogers (Sharf, 1996). This approach is founded upon a positive view of the individual, and the focus of treatment is on understanding and caring rather than challenging and advice giving. It is the opinion of this author that such an approach holds promise for work with depressed adolescents. Person-Centered Therapy provides the acceptance which is so paramount to the developmental stage of teens. Also, rather than placing additional demands on the already strained schedule of adolescents by requiring behavior logs or other homework assignments, behavior change can be prompted through the clients developing
understanding of their emotions and their behaviors, and the relationship between the two.

Regardless of which therapeutic technique is utilized, certain considerations must be kept in mind when conducting depression therapy with adolescents. These include an enhanced emphasis on developing a therapeutic alliance (as most adolescents are not voluntary, self-referred clients), awareness of developmental factors, age appropriate homework tasks, reinforcement for homework, and the involvement of parents Lewinsohn (1994). The role of parents in treatment is one area which must be handled with considerable sensitivity. On one hand, the teenager must be treated as an autonomous person. However, parents will often feel the need to be involved in the therapeutic process, and can in fact be a valuable asset (Davidson, 1976; Sarvet, 1998). Training adolescents in strategies for coping with their parents may also be a focus of the depression therapy sessions (Lewinsohn, 1994).

**Locus of Control**

The benefits of an internal locus of control are explained in part by Benson & Deeter (1992). “Individuals with an internal locus of control believe that they have control over their environment, and can effect a difference in the outcome they experience. They also might be less vulnerable to psychological disorders (P. 189).” Research supporting this position includes a study by Kelley and Stack (2000) in which adolescents with an internal locus of control reported greater levels of global happiness and global life satisfaction. In contrast, adolescents with an external locus of control
express higher levels of anxiety and depression (Betton & Deeter, 1992). The concept of locus of control has not received as much attention from the psychological community in recent years as in the past. This point is evident when observing that a recent study of seven locus of control measures did not feature any which were developed after 1983 (Hau, 1995). In addition, no published, well-normed rating scale devoted exclusively to interpreting an individual's locus of control orientation was found when preparing this study. However, given research which suggests that locus of control can directly predict level of depression (Betton & Deeter, 1992), a revisiting of this construct is warranted.

In addition to depression, an external locus of control has been linked to the presence of a broader construct referred to as learned helplessness (Reynolds & Miller, 1989). Learned helplessness develops when an individual consistently experiences negative consequences which are independent of their actions (Benson & Deeter, 1992). Since individuals with an external locus of control are likely to perceive any negative consequence as occurring due to factors beyond their control, the development of learned helplessness would be a logical and likely consequence. As with depression, learned helplessness is a condition on which relatively limited research has been conducted with adolescent populations.

Finally, it should be noted that one relationship that still remains unclear, if any relationship exists at all, is the one between gender and locus of control. Archer and Watterman (1988) reviewed 22 studies which (in part) investigated gender differences in locus of control. No significant gender differences were found in 15 of these studies; males were found to be more internal in six; and females more internal in only one.
Depression and Locus of Control

One link which has been suggested but not thoroughly investigated involves the relationship between adolescent depression and locus of control. Existing research does suggest that individuals with an external orientation experience greater levels of anxiety and depression. Using a sample of clinically depressed adolescents, Hammond and Romney (1995) found this external locus of control/depression link to exist. A confirmatory study conducted by Benson and Deeter (1992) and involving 100 adolescents found that locus of control was able to directly predict levels of depression, with externals displaying greater levels of depression than internals. Butler (1980) described several attributes typically seen in depressed adolescents, many of which relate to LOC. These factors included helplessness, hopelessness, low self esteem, social isolation, unhappiness and cognitive distortions. He went on to add that depressed students typically distort experiences, assuming they were the result of external factors.

Depression is a condition which is often triggered by events which are understandably stressful and upsetting. However, students with an external locus of control are more likely to develop depression when faced with negative life events then are their peers with an internal LOC (Herman-Stahl & Petersen, 1990). Finally, it should be noted that depression is not the only disconcerting adolescent condition with which locus of control has been linked. Studies involving interviews with teenage girls who were or had been pregnant found LOC to be a causal factor for the early pregnancy (McIntyre, Savdargas, & Howard, 1991).
Locus of Control Interventions

Locus of control appears to be a construct which can be effectively influenced through intervention (Chubb, 1997). One suggested technique for enhancing feelings of control in adolescents is attribution retraining. This approach involves teaching students to attribute positive outcomes to internal factors, rather than arbitrary external events (Benson & Deeter, 1992). Instruction in rational decision making has also been proposed as an appropriate means by which to enable adolescents to feel empowered (Benson & Deeter, 1992).

As with depression therapy, cognitive behavioral approaches to developing an internal locus of control have received the most attention as of late. Thus far the results have been promising. Often, these studies measure the effectiveness of CBT on both depression and LOC. Group therapy using CBT has been effective in relieving depression and for moving clients from an internal to external locus of control following their exposure to a stressful life event (Schulte, 1998).

For a school based mental health professional, locus of control interventions are attractive for multiple reasons. First, research has shown that the presence of a strong, internal LOC can actually serve as a buffer against the development of depression (Herman-Stahl & Petersen, 1990). In addition, locus of control is a construct which lends itself well to psychoeducational implementation approaches. Given the lack of time which school psychologists can devote to individual therapy, conducting or training
others to conduct lessons and small group discussions designed to help students internalize their locus of control are attractive.

**Summary**

The preceding literature review highlighted some of the strengths and weaknesses of the existing literature on the topics of adolescent depression and locus of control. Generally speaking, little consensus exists on any topic, which impedes efforts to understand, identify, and treat adolescent depression. And in particular the paucity of research of diverse populations detracts from efforts to serve students who are not in the racial, educational, and economic majority. The remainder of this dissertation therefore addresses a variety of issues which have yet to receive adequate, if any, attention from researchers.
Population for Study

The population for this study was all ninth grade students from one public high school in a metropolitan Louisiana school district. The particular high school chosen for participation houses an academic/talented arts magnet program. Requirements for acceptance into this program are as follows: a minimum 2.5 GPA for the past five quarters; reading stanine of 5 or above; good attendance and behavior. Magnet programs in this district draw students from a wide geographic area, are free of charge, provide transportation, and feature a lower student/teacher ratio than do other schools in the district. The population for this study, which was the 9th grade class, consisted of 349 students at the time of assessment. In terms of gender, the population was 37% male and 63% female. In addition, 30% of students qualified for Free/Reduced lunches.

The freshman class at this particular school was chosen for study for a variety of reasons. The school’s housing of the academic/talented arts magnet program allowed for the investigation of a population which has been overlooked in the educational and
psychological literature. The school also featured the racially diverse student
composition desired for this particular investigation. In addition, the exclusive use of the
freshman class rather than the haphazard selection of students from various grade levels
provided insight into the challenges and utility of conducting grade level depression
screening within a school. Should the screening approach used in this study prove to be
an effective and useful method for screening ninth grade students, the same approach
could be easily applied to other grade levels.

Another key factor leading to the selection of this particular school was the nature
of the academic environment. Specifically, students attending this school were required
to maintain a grade point average of 2.5 or higher. Students falling below this level are
placed on probation and, should their academic difficulties persist, expelled from the
school. This strict criteria generally has the greatest impact on the Freshman class, where
as many as 100 students per year fail to be accepted back as sophomores. Therefore, the
use of this site for study afforded the researcher a chance to investigate the potential
relationship between a pressure filled academic environment and symptoms of adolescent
depression.

Due to this school’s selection for study, the primary researcher was assigned by
the cooperating school district to be their school psychology intern. This placement
allowed for close monitoring of all phases of the study. In addition, the sensitive nature
of this study required interaction between the researcher and the students (and select
families) whose results on the depression assessment raised significant concerns.
This study attempted to include the majority of the 349 ninth graders at the selected high school. Students not included in the sample were those who either failed to obtain parental consent or were unavailable during the testing window. The teacher population for this study was comprised of the 17 educators who spent a significant portion of their day instructing ninth grade students.

Information Collected

Completion of this study required the acquisition of multiple pieces of information from various sources. Teachers who participated were asked to provide personal information including race, gender, years of teaching experience, and attitude towards adolescent depression (see Appendix E). More importantly, for each student participant who returned their consent forms prior to the day of the screening, one or more of their teachers were asked to complete a confidential depression rating instrument for that child. Students participants were asked to complete a self-report version of the same depression rating instrument as their teacher. Students were also asked to fill out both a locus of control measure and a brief life stress inventory. When completing these forms the students were asked to give their name, race, and gender. This identifying information was for the researcher's purposes only, and was kept confidential. In addition to the information gathered from student and teacher participants, the school was asked to furnish information on individual 9th grade student’s attendance, socioeconomic status, gender, and grade point average.
Instruments

Of primary concern in this study was obtaining appropriate depression measures from both students and teachers. Certain considerations were kept in mind in selecting the rating form from multiple options. One issue raised in research by Youngstrom (2000) and colleagues was that “Teachers, parents, youths and clinicians often use different rating scales, assessing overlapping but non-identical sets of behaviors and often varying in the frame of reference (p.1038).” To minimize such a complication, priority was given to selecting a single instrument which included both a student and teacher report form. And as this study attempted to screen for depression from a population which should by and large be non-depressed, instruments which only ascribed severity levels of depression to its respondents were discounted. Finally, scales which included depression as part of a lengthy instrument designed to measure several other behaviors were not considered. A number of scales were thoroughly reviewed during the selection process. Table 3.1 lists some of the more popular assessment instruments for the identification of internalizing disorders for children, and the reasons for which they were excluded.

The instrument which best met the listed criteria was the Depression and Anxiety in Youth Scale (DAYS; Newcomer, Barenbaum, & Bryant, 1994). Both the student and the teacher version of the DAYS yield standard scores (mean=100; SD=15) which place students in the normal (standard score 75-114) range of functioning, or in one of three depression classifications (mild, 115-130; moderate, 131-145; severe, 146 and above). Information provided by the publisher indicate that 13% of students in the normative
sample self-reported themselves as being above the normal range for depressive symptoms, while teachers rated 16% of their students as experiencing mild or greater levels of depression. As the DAYS utilized separate subject samples for the three scales (parent, teacher, student), no estimates from the norming sample were available suggesting the degree to which student and teacher ratings correlate.

<table>
<thead>
<tr>
<th>Instrument (&amp; Primary Author)</th>
<th>Reason(s) for Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reynolds Adolescent Depression Scale</td>
<td>1</td>
</tr>
<tr>
<td>Child Behavior Checklist</td>
<td>1, 3</td>
</tr>
<tr>
<td>Beck Depression Inventory</td>
<td>1, 4</td>
</tr>
<tr>
<td>BASC Self-Report</td>
<td>1, 3</td>
</tr>
<tr>
<td>Devereux Behavior Rating Scale</td>
<td>3</td>
</tr>
<tr>
<td>Internalizing Symptoms Scale for Children</td>
<td>2</td>
</tr>
</tbody>
</table>

Key  
1= Scale does not have self report and teacher report froms.  
2= Not normed for adolescents.  
3= Designed to measure several dimensions of behavior.  
4= All scores fall into depressed range.

Table 3.1 Instruments Rejected for Use in this Study

The DAYS has been reviewed on multiple occasions, with similar conclusions drawn. The most comprehensive review (Brooke, 1995) suggests that the instrument is one which can be used with confidence to screen for anxiety and depression in typical
learners. The student scale contains 22 items for the students to rate on a 4 point likert scale. Half of the items on this scale are devoted to the detection of anxiety, the other half to depression. The teacher version describes 20 behaviors (13 related to depression, 7 to anxiety) which are rated as T/F. For the purpose of this study, only the depression items (11 questions for students, 13 for teachers) were completed by the various respondents. This modification of the instrument was considered appropriate for a variety of reasons. Primarily, the collection of data on anxiety was not seen as necessary or appropriate given the devotion of this project to the understanding of depression. In addition, the demands of time on both teachers, students, and the researcher were taken into account.

The items for the DAYS scale were selected in the following manner. Utilizing the DSM-III-R (APA, 1987) criteria for diagnosis, the authors developed a list of questions for assessing depression, anxiety, or both. This list was given to five professionals from the psychiatric community who were considered to be experts in the diagnosis of pathology. These individuals were asked to select 20 items that characterize depression, 20 for anxiety, and 20 for both. Items that were most frequently assigned to either the depression or anxiety category were selected. A minimum correlation of .30 of individual items to total score (depression or anxiety) was used in selecting questions. This method resulted in strong content validity for both the depression and anxiety scales (Brooke, 1995). Criterion related validity was established through six separate studies which compared DAYS results with the Reynolds Child Depression Scale and the Children’s Manifest Anxiety Scale. The average correlation coefficient of .73 provides
moderate evidence of concurrent validity (Brooke, 1995). Information from additional studies demonstrate significant differences between normal populations (regular education students) and groups of clinically diagnosed and SED adolescents.

More information is available supporting the validity of the scales than is offered in support of their reliability. The average internal consistency reliability coefficients for the three scales (parent, teacher, student) are above .80, which satisfies the minimum reliability requirements for an individually administered screening test. Test-retest reliability scores were high for the teacher version (.96 for depression, .94 for anxiety), but were lower on the student version (.72 for depression, .70 for anxiety). Again, no interrater reliability estimates were provided in the instrument manual.

In reviewing the DAYS, Maccow (2000) indicated that this screening instrument has a number of positive attributes. It is quick and easy to administer and score, and its scales are based upon a sound theoretical framework. In addition, the internal consistency reliability and intercorrelations among the constructs are acceptable. Limitations of the scale were noted as well, including a lack of information on interrater reliability, and the use of separate populations for the standardization of the three scales. In addition, the questions on the scale do little to mask their intent, giving rise to the possibility of faking (Smith, 2000). Despite its limitations, the instrument has been specifically recommended for screening large groups of students, and for conducting research (Smith, 2000). This overall interpretation of the instruments strengths and weaknesses was echoed in Brooke’s (1995) review of the DAYS.
A final note on the DAYS comes from a research article with particular relevance to the study outlined here. In *Depression and anxiety in children and adolescents learning disabilities, conduct disorders, and no disabilities* (Newcomer, Barenbaum, & Pearson, 1995), the lead author of the DAYS directed a study which included 232 regular education, in addition to smaller groups of LD and CD students. This study was important for a number of reasons, including the provision of estimates to which student and teacher ratings on the DAYS agree. Results indicated that teachers failed to identify significant depressive symptoms in students who self-reported mild or greater levels 72% of the time. Levels of agreement were higher for students with disabilities (50% agreement); however, it could not be determined if this was the result of student/teacher characteristics, smaller class sizes, or other factors. In addition results from a large sample of regular education secondary students was provided. Results from these various groups are used later in this study to determine how magnet school students compare in terms of prevalence rates and level of agreement between student and teacher depression ratings.

For the purposes of assessing the student’s locus of control, the Multimodal Locus of Control Scale (Levenson, 1973) was utilized. This instrument was originally developed for use with psychiatric patients, but has since been used in non-clinical research involving adults and adolescents. The Multimodal Locus of Control Scale yields raw scores on three subscales: internal control, powerful other control, and chance control. Completion of this measure involves subjects rating on a six point scale their responses to such questions as “To a great extent my life is controlled by accidental
happenings.” Ratings range from 1 (strongly disagree) to 6 (strongly agree). Though the scale is recommended for use by both adolescents and adults, no published norms for regular education adolescents were available. The initial norming sample utilized 15 depressed adults and 96 non-depressed subjects. Results indicated significantly higher scores for depressed participants on the powerful other and chance control domains (Levenson, 1973). A second study utilizing college students found that, in comparison to their Caucasian peers, African American students recorded significantly higher scores on the powerful other and chance domains. This difference occurred even when SES was controlled for (Garcia & Levenson, 1975).

One of the attractive features of this scale which lead to its selection over other LOC measures was its multi-modal nature. Rather than simply drawing a black and white internal vs. external division, subject’s responses provided scores on three separate subscales. By providing scores pertaining to internal locus of control (ILC), powerful others control (POC), and chance control (CC), this scale allows for the development of a profile which is richer and more informative than measures which include only two factors. Overall, good reliability scores were obtained in the initial norming sample, including internal consistency alphas of .67, .82, and .79. on the ILC, POC, and CC scales, respectively.

The ten questions generated for the stressful life events questionnaire (see Appendix D) were adapted from the survey instrument utilized in a longitudinal study on the effects of depression and life stresses (Ge, Lorenz, Conger, Elder, & Simons, 1994). Their study incorporated a modified and expanded version of the Junior High Life
Experience Survey. Their amended instrument consisted of 25 questions, which the primary researcher for this study was able to group into six broad categories, including death, separation, trouble(school/legal), finances, parental conflict, and personal injury.

The life stress questionnaire for this study was developed by the primary researcher to address the six categories listed above. In addition, care was taken to develop the instrument in such a way as to allow for further investigation into a conclusion drawn from researchers in the Ge, et al (1994) study. Their study suggested that females were more distressed by problems which were interpersonal in nature, whereas disrupted instrumental activities resulted in greater stress for males. The instrument which was used in this study was therefore comprised of 10 questions which were classified as either primarily interpersonal or instrumental.

Data Analyses

Statistics from this project were generated using SPSS v.10. The information collected with this study allowed for the generation of a host of descriptive statistics with relevance to school psychologists. Those descriptives are reported to provide general information on such items as percentage of males/ females rating themselves as depressed, and the absence rates of various racial groups. In addition to such descriptives, a host of more in-depth statistical analyses were run, which are outlined in the paragraph’s below.

The preliminary research question posed in this study was designed to investigate how prevalence rates of depression in magnet school adolescents compare with other
student groups. This will be accomplished by comparing the percentage of depressed students obtained in this study to others which have utilized the DAYS rating scale. The second research question examines the degree to which teacher and student ratings of the students’ level of depressive symptoms agree in this population. A simple two by two matrix allows for a quick analysis and interpretation of the information obtained regarding this research question. As with the first research question, it is interesting to compare results from this student group to those from other studies utilizing different student groups. Research question three (impact of racial/economic variables on student self report of depression) was assessed using a two-way analysis of variance with the depression standard score from the students DAYS self-report serving as the dependent variable, while race (3 categorical groups: Black, White, Other) and SES (2 categorical groups: Low SES, Middle/High SES) were the independent variables. Independent samples t-tests were used for question four, using gender, years of teaching experience (0-5, 11+), race (Black, White), and attitude as the independent variables, and the student depression standard score as the dependent variable.

The development of a Pearson Correlation Coefficient, along with corresponding r2 values, was determined to be most appropriate way to address research questions five (relationship between depression and academic correlates of GPA, Attendance, and Traumatic Life Event), six (correlation of LOC and stressful life events), seven (relationship between LOC and depression assessments), nine (relationship between locus of control and academic correlates), and ten (correlation between life stress and locus of control). For Question 8 (racial, economic, and gender variables related to self report of
LOC), data was analyzed using a three way analysis of variance to determine if significant differences exist between different student groups. Finally, one-way ANOVA’s were incorporated to determine if significant differences existed between pre- and post-intervention DAYS measures for students who received counseling versus a control group.

Procedures

This research study used when conducting following the 10 general steps outlined in Table 3.3. Details from each of these steps are outlined here.

1. Identify study population and select the assessment date.

Once the proposal for this study was accepted, the director of pupil appraisal services for the school district in which the primary researcher was conducting his school psychology internship was contacted to discuss potential sites. A number of sites were discussed and eventually one was selected due to the unique characteristics of its student population. Following this determination the principal for the site was contacted, first by mail (see Appendix B), and then by telephone. The principal agreed to the use of his site for research, and a face to face meeting was arranged for the beginning of the academic year.

In terms of the study population, all 9th grade students at the selected site were given the opportunity to participate in the depression screening. Furthermore, teachers who spent a significant portion of their day teaching 9th grade students were given a
chance to participate by rating students using the teacher version of the DAYS scale. These seventeen teachers were identified for the primary researcher by the assistant principal.

The date for assessment (March 5th, 2002) was chosen based on the following criteria. First, in order to allow teachers to become familiar enough with their students to effectively rate them on the depression scale, and to allow for a more valid assessment of academic correlates (GPA and attendance), the research was conducted during the second half of the school year. Second, in an effort to be sensitive to the demands on teacher time and to provide a more meaningful relationship between GPA and various student variables (i.e. depression, LOC), an assessment date was chosen which recently followed the completion of a grading period.

2. **Detail assessment procedures to teachers.**

Utilizing the teacher list provided by the school administration, the primary researcher distributed a letter which provided a brief overview of the research study and asked the teachers to attend a short (no longer than 30 minute) meeting conducted immediately after school. Of the 17 teachers identified by the school administration as being appropriate candidates for the study, 15 attended. During this meeting, which was sanctioned by the school’s administration but was not considered mandatory, the primary researcher further explained to the attending faculty the purpose, procedures, and other issues associated with this study. The outline for this discussion is available in Appendix G. Items which were discussed during this meeting included the potential benefits of this
study, the need for confidentiality, and the commitment required from participating teachers. In addition, faculty members were made aware that their participation, as well as that of their students, is 100% voluntary. Furthermore, the decision of the individual faculty members to participate would be known to the primary researcher only and would not be shared with the administration or other teachers. At the conclusion of this study 12 teachers turned in permission forms on which they expressed a willingness to participate. All but one of these teachers completed the forms which were assigned to them.

3. Obtain consent forms from the study population.

Immediately following the information meeting described above, teachers were asked to complete the Teachers Consent Form (see appendix F), indicating their willingness or refusal to participate in this study by completing a depression assessment for their students. Approximately two weeks prior to the chosen assessment date, homeroom teachers were given student/parental permission forms, approved by the OSU Human Subjects Review Board, which were distributed to their homeroom students (See Appendix C). These letters needed to be signed by the student and a parent/guardian in order for the student to participate.

The primary researcher provided homeroom teachers with instructions for the return of consent forms. The procedure involved teachers collecting signed consent forms every morning after announcements and sending them down (in an envelope provided by the researcher) to the guidance office to be collected on a daily basis. The
envelope would be returned to the teachers mailbox shortly after so that the same procedure could occur the following day. Reminders were included on the morning and afternoon announcements to help facilitate this process.

The procedure outlined above resulted in a return rate of roughly 20%, which was considered inadequate. In an effort to boost returns the primary researcher went to speak to all 9th grade geography classes to discuss the project with the students, ask for their support, and distribute more permission forms. During these presentations a number of students produced signed permission forms, and indicated that their homeroom teachers had failed to ask for them. In light of this students were told that they may return the forms to their geography teacher from now on, or drop them directly in the collection box in the guidance office (which was monitored by the school secretary to ensure confidentiality). This served to limit the number of teachers involved in the collection process, as there were only three geography teachers for the entire ninth grade, and to provide interested students the most direct route possible for turning in their forms. Use of these additional efforts resulted in a sample which comprised 58% of the target population.

4. **Students complete ratings on selected day during geography classes.**

On the predetermined date of assessment, students were asked to complete the various rating scales during their geography classes. Use of geography classes for data collection was recommended by the school administration, which indicated that all ninth graders take a common freshman geography course. In order to ensure standardization of
administration the primary researcher attended all 9th grade geography classes (12 in all) over a three day period to administer the rating scales. Of the final study population, 34% (seventy students) turned in their permission forms at this time. As the teacher versions of the DAYS rating scales were already distributed prior to the students administration (see procedural step #5), these students were not assessed by any of their teachers.

<table>
<thead>
<tr>
<th>Step</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Identify study population and select an assessment date.</td>
</tr>
<tr>
<td>2.</td>
<td>Detail assessment procedures to teachers.</td>
</tr>
<tr>
<td>3.</td>
<td>Obtain consent forms from population.</td>
</tr>
<tr>
<td>4.</td>
<td>Students complete ratings on selected day during geography classes.</td>
</tr>
<tr>
<td>5.</td>
<td>Teachers given forms that same day, and asked to return them within five school days.</td>
</tr>
<tr>
<td>6.</td>
<td>Depression ratings briefly scanned for “red flag” results. At-risk students contacted for further assessment and some follow-up counseling sessions scheduled.</td>
</tr>
<tr>
<td>7.</td>
<td>Make-ups conducted throughout the week by researcher during homeroom/first period.</td>
</tr>
<tr>
<td>8.</td>
<td>All depression forms scored (student and teacher).</td>
</tr>
<tr>
<td>9.</td>
<td>Post intervention measures given to select students to assess effectiveness of counseling intervention.</td>
</tr>
<tr>
<td>10</td>
<td>Remaining scales scored and statistics analyzed.</td>
</tr>
</tbody>
</table>

Table 3.2: Outline of Procedures for Conducting Study
5. Teachers given rating forms on same day as students, and asked to return them within five school days.

Once a signed student consent form was returned, their most recent grade report was pulled, copied, and kept in a separate file. Prior to the date of administration these reports were utilized to determine which teacher would rate each student. Care was taken to provide teachers with even numbers of students to rate whenever possible. Due to the relatively high teacher-to-student participant ratio (approximately 1 teacher for every 12 students) evident at that time, a number of students were selected to be rated by two of their teachers.

On the morning of the first day for student assessments, participating teachers received their version of the DAYS and were asked to rate each of the students assigned to them within 1-weeks time. This timeline is given on the advice of the authors of the DAYS (Newcomer, Barenbaum, & Bryant, 1994) manual. All eleven teachers who participated in this study, with the exception of one, completed their ratings during this time frame, with the other teacher completing her rating within two weeks time. Directions for this completion for these forms were stated clearly on the DAYS form. In addition, the primary author for this study was available on-site throughout the week long assessment to answer any questions which may have arisen regarding the completion of this form. However, no questions were raised by the teacher participants in regards to form completion. A teacher demographic form was also included for all faculty participants. All forms were returned to the primary researcher by the teachers in an envelope provided for them.
6. Depression ratings briefly scanned for “red flag” results. At-risk students contacted for further assessment and some follow-up counseling sessions scheduled.

As the necessary hand-scoring of the depression instruments was a lengthy process, all completed scales were visually scanned by the researcher to identify students whose results suggested the threat of suicide. These forms were identified by the student’s response of “often” or “all the time” to the question which probed suicidal thoughts. As detailed in the parental consent form, any students identified during this procedure were contacted by the researcher (also the school’s psychological intern) for a risk assessment. This assessment, which also served as an initial counseling session for the student, included the use of a structured suicide interview (Appendix I). Following this session determinations were made on whose parents should be contacted, and which students would participate in follow-up counseling sessions.

7. Make-ups conducted throughout the week by primary researcher.

As the primary researcher had prepared assessment packets with student names on them for all students who turned in signed permission forms, it was easy to identify and keep track of those students who were absent during the class-wide assessment. These students were later called to the guidance office for individual/small group administrations (conducted again by this study’s primary author), and the administration directions did not vary from the script used during the large group data collection periods.
8. All depression forms scored (student and teacher).

All depression rating forms, teacher and student, were scored as soon as possible. Had any of these students fallen into the severe (standard score: 146+) range of depressive symptoms they would have been contacted by the primary researcher for further assessment. As this was not the case all scores were recorded and entered into the SPSS v.10. In addition, six of these students with standard scores on the depression self assessment which indicated mild or moderate levels of depression were eventually selected to comprise a control group for those students who had received counseling as an intervention.

9. Post intervention measures given to select students to assess effectiveness of counseling intervention.

Following a six-week intervention period during which the nine students selected for counseling had participated in one to four sessions, these students were contacted for individually administered follow-up assessments. In addition, six control students were also contacted and provided follow-up ratings. These results were used to measure the effectiveness of the counseling intervention (see results in Chapter Four).
10. Remaining scales scored and statistics analyzed.

The final step in the assessment procedure consisted of the remaining forms being scored and the results analyzed using the techniques outlined in the Data Analysis section of this chapter. This procedure was completed solely by the primary author, and at no time were the results recorded or presented in such a way that any individuals could be identified.

Timelines

**March - June 2001**: Selection of assessment instruments, review of literature, development of initial research proposal.

**June – February 2002**: Refinement of data analysis procedures and review of initial proposal with generals committee. Selection of school for participation in the study. Approval for study by OSU doctoral committee. Review by human subjects committee.

**February/ March 2002**: Permission forms distributed and sample population obtained. Teachers and students complete evaluations on variables of interest. Information on students (GPA, SES, attendance) obtained from schools.

**March – June 2002**: Analysis/interpretation of data. Write up of study results and implications.

**Summer 2002**: Presentation of study results to OSU doctoral committee.
CHAPTER 4

RESULTS

Information obtained on student and teacher participants are presented in this chapter. The section begins with a discussion of the descriptive statistics generated in this analysis. This is followed by a more specific analysis of the collected data as it applies to each of the 10 research questions posed in this study. In addition, data is provided on depression intervention efforts which were conducted with a small number of students. Finally, a discussion of the meaning and implications of these results is presented in Chapter 5.

Descriptive Statistics

Information on 12 to 13 variables was collected for each of the students who participated in this study. A total of 203 students consented to participate, a number which represents 58% of the 349 ninth graders at the Magnet High School selected for this study. For each of the participating students, information was collected on the
following variables of interest: gender, race, grade point average, absences, socioeconomic status, stressful life events (interpersonal, instrumental, and total), locus of control (chance control, powerful other control, and internal control), and a depression self-rating. In addition, a total of 154 teacher ratings were compiled on 123 students. Furthermore, information pertaining to the gender, GPA, SES and absences of the 146 non-participants was collected. This information was obtained and aggregated for the purpose of comparing participants and non-participants.

Participants and Non-Participants

Table 4.1 provides a comparison of the participants and non-participants on the available variables. The information presented in this table suggests strong similarities for participants versus students who chose not to participate in this study. All told, student participants outnumbered non-participants by 57. Of the 349 ninth grade students at the selected high school, 30% were eligible for the free/reduced lunch program. An identical percentage of students from the sample population were eligible for the program, suggesting that the SES of the sample provides an accurate reflection of the population as a whole. Participants in this study had an mean GPA of 2.89, which was identical to the 2.89 average of non-participants. The students in this study had missed an average of 3.17 days of school at the time of assessment, whereas non-participants had missed an average of 3.09 days, a difference of only .08. And though slightly greater variation was seen when the data was further analyzed by gender, the differences between participants and non-participants are generally minor. This information provides
confidence for generalizing the results obtained from the sample to the population as a whole.

<table>
<thead>
<tr>
<th></th>
<th>All Participants</th>
<th>All Non-Participants</th>
<th>Male Participants</th>
<th>Male Non-Participants</th>
<th>Female Participants</th>
<th>Female Non-Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>203</td>
<td>146</td>
<td>59</td>
<td>69</td>
<td>144</td>
<td>77</td>
</tr>
<tr>
<td>Mean GPA</td>
<td>2.89</td>
<td>2.89</td>
<td>3.03</td>
<td>2.97</td>
<td>2.84</td>
<td>2.81</td>
</tr>
<tr>
<td>Mean Absences</td>
<td>3.17</td>
<td>3.09</td>
<td>2.62</td>
<td>2.26</td>
<td>3.40</td>
<td>3.83</td>
</tr>
<tr>
<td>Regular Lunch (%)</td>
<td>142 (70%)</td>
<td>102 (70%)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Free/Reduced (%)</td>
<td>61 (30%)</td>
<td>44 (30%)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Table 4.1: Comparison of Student Participants and Non-Participants

Participants: Overview of Collected Data

General information on all student variables for which data was collected is available in Table 4.2. In terms of gender we see that female participants (144) outnumbered males (59) by a considerable margin. The number of absences reported for students in the study, as of the beginning date of the assessment, ranged from 0-21, with a mean of 3.17. In terms of G.P.A, 2.89 was the mean for participants. Of the 10 possible stressful life events which were presented to the students to select from, the scores ranged
from 0-9, with a mean of 3.55. On average, more interpersonal stressful life events were reported than were stressful events that were more instrumental in nature.

Another variable on which students reported was locus of control. In reading these locus of control scores it should be kept in mind that the higher the score, the greater the attribution placed by the rater on influences from that area (Internal, Chance, Powerful Others) on events/outcomes in their lives. The highest mean score was in the area of Internal Control followed by Chance Control, and Control by Powerful Others. For purposes of comparison, the mean scores for magnet school adolescents on the Multimodal Locus of Control Measure is listed along with results from other populations who were assessed using the same scale in Table 4.2. Finally, in terms of depression, the average self assessment standard score on the DAYS of 101.9 was .68 points lower than the average score of 102.58 on the teacher assessment. Additional information about student participants, including a breakdown of data by gender, racial, and economic groups, is available in Table 4.3.

<table>
<thead>
<tr>
<th>Clients</th>
<th>M: Internal LOC</th>
<th>M: Powerful Other</th>
<th>M: Chance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Adults*</td>
<td>35.5</td>
<td>16.7</td>
<td>13.9</td>
</tr>
<tr>
<td>Depressed Adults*</td>
<td>36.9</td>
<td>21.3</td>
<td>19.9</td>
</tr>
<tr>
<td>White College Students*</td>
<td>34.75</td>
<td>18.68</td>
<td>17.44</td>
</tr>
<tr>
<td>Black College Students*</td>
<td>35.33</td>
<td>21.47</td>
<td>22.95</td>
</tr>
<tr>
<td>Magnet School Adolescents</td>
<td>34.16</td>
<td>22.64</td>
<td>24.28</td>
</tr>
</tbody>
</table>

Table 4.2: Locus of Control Means: Comparison of Magnet School Students to Populations from Previous Studies
Race, Gender, and SES: Significant Variations

A number of the variations in the descriptive statistics described above will be further investigated in the course of answering the 10 guiding research questions for this project. However, in an effort to further our understanding of the student sample, variations on variables which are peripheral to the key questions posed in this study were investigated. Such an effort was considered worthwhile given our limited knowledge of magnet school adolescents. When the variable of race was considered utilizing a one-way analysis of variance we find a significant (alpha=.05) variation in GPA. As race is a discrete, three-level category, the significant F’s reveal the presence of significant differences, but fail to tell us exactly where those differences lie. Follow-up T-tests were used to further understand these variances.

In terms of GPA, an obtained F score of 15.358 indicated the presence of rather large differences between group means. Looking back to the descriptive statistics we see that the mean G.P.A for both the White and Other categories were above 3.0, whereas the mean GPA for African American students was 2.65. T-tests were conducted and revealed significant differences between the GPA’s of African American and White students (t=4.715), and African American and Other students (t=3.756). The obtained t value of 1.082 seen when the GPA’s of Caucasian and Other students was compared did not meet criteria for significance. All other racial variations (e.g. absences, life stress, depression ratings) which were assessed using one way ANOVA’s fell short of statistical significance (alpha=.05).
Table 4.3: Means for Participants on Variables of Interest by Gender, Race, and SES

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Male</th>
<th>Female</th>
<th>African</th>
<th>White</th>
<th>Other</th>
<th>Reg. Lunch</th>
<th>Free Lunch</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>203</td>
<td>59</td>
<td>144</td>
<td>111</td>
<td>75</td>
<td>17</td>
<td>142</td>
<td>61</td>
</tr>
<tr>
<td>GPA</td>
<td>2.89</td>
<td>3.03</td>
<td>2.84</td>
<td>2.65</td>
<td>3.15</td>
<td>3.34</td>
<td>2.94</td>
<td>2.77</td>
</tr>
<tr>
<td>Absences</td>
<td>3.17</td>
<td>2.62</td>
<td>3.40</td>
<td>3.19</td>
<td>3.46</td>
<td>1.76</td>
<td>3.49</td>
<td>2.42</td>
</tr>
<tr>
<td>Interpersonal Stresses</td>
<td>2.18</td>
<td>1.86</td>
<td>2.31</td>
<td>2.09</td>
<td>2.29</td>
<td>2.24</td>
<td>2.26</td>
<td>2.06</td>
</tr>
<tr>
<td>Instrumental Stresses</td>
<td>1.41</td>
<td>1.20</td>
<td>1.50</td>
<td>1.43</td>
<td>1.42</td>
<td>1.24</td>
<td>1.46</td>
<td>1.30</td>
</tr>
<tr>
<td>Total Stresses</td>
<td>3.55</td>
<td>2.98</td>
<td>3.79</td>
<td>3.50</td>
<td>3.65</td>
<td>3.47</td>
<td>3.65</td>
<td>3.31</td>
</tr>
<tr>
<td>Chance Control</td>
<td>24.28</td>
<td>24.29</td>
<td>24.27</td>
<td>24.49</td>
<td>23.09</td>
<td>28.18</td>
<td>24.05</td>
<td>24.82</td>
</tr>
<tr>
<td>Powerful Other Control</td>
<td>22.64</td>
<td>22.00</td>
<td>22.90</td>
<td>22.43</td>
<td>21.92</td>
<td>27.12</td>
<td>22.82</td>
<td>22.20</td>
</tr>
<tr>
<td>Internal Control</td>
<td>34.16</td>
<td>34.29</td>
<td>34.11</td>
<td>34.66</td>
<td>33.65</td>
<td>33.18</td>
<td>33.71</td>
<td>35.21</td>
</tr>
<tr>
<td>Self Depression Assessment</td>
<td>101.9</td>
<td>96.36</td>
<td>104.17</td>
<td>99.59</td>
<td>103.53</td>
<td>109.71</td>
<td>104.09</td>
<td>95.74</td>
</tr>
<tr>
<td>Teacher Depression Assessment</td>
<td>102.58</td>
<td>100.96</td>
<td>103.32</td>
<td>104.83</td>
<td>98.2</td>
<td>104.09</td>
<td>102.20</td>
<td>103.36</td>
</tr>
</tbody>
</table>

Chart 4.1: Gender, Racial, and SES Variations in GPA, Absences, and Life Stress

70
When student scores were divided by gender and compared, the variations observed in absences, GPA, instrumental life stress, and teacher depression ratings all failed to meet the criteria for statistical significance. However, gender scores in the area of depression self-assessments, total life stress, and interpersonal life stress were significantly different. The 7.81 point mean difference favoring females on the depression self-assessment was a significant (F=7.250), and was not unexpected given other studies into gender variations in depression. Females in this study also self-reported significantly higher levels of interpersonal life stress (F=3.959) and total life stress (F=5.868). The fact that the discrepancy between male and females reports of stressful life events was significant for interpersonal life stress but not instrumental life stress (p=.079) lends support for the notion that females are more susceptible to interpersonal struggles than are their male counterparts.

When looking at student scores based on SES, other than differences in self-reported depression (F=.002), which will be examined more closely when the 10 research questions are reviewed, no variations met the criteria for statistical significance. One discrepancy which nearly exceeded the criteria was absences (F=3.603; p=.059), where students who did not participate in the free/reduced lunch program had a rate of absenteeism which was more than 1 day greater than the average for students who were eligible for the program (3.49 days vs. 2.42 days).
### Depression Assessments: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>Self: Not Depressed</th>
<th>Self: Mild</th>
<th>Self: Moderate/Severe</th>
<th>Teacher: Not Depressed</th>
<th>Teacher: Mild</th>
<th>Teacher: Moderate/Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Respondents</td>
<td>71%</td>
<td>17%</td>
<td>12%</td>
<td>76%</td>
<td>19%</td>
<td>5%</td>
</tr>
<tr>
<td>GPA</td>
<td>2.94</td>
<td>2.79</td>
<td>2.73</td>
<td>2.83</td>
<td>2.82</td>
<td>2.70</td>
</tr>
<tr>
<td>Absences</td>
<td>2.69</td>
<td>5.21</td>
<td>3.17</td>
<td>3.17</td>
<td>2.98</td>
<td>4.92</td>
</tr>
<tr>
<td>Interpersonal Stresses</td>
<td>1.81</td>
<td>3.15</td>
<td>3.0</td>
<td>2.02</td>
<td>2.26</td>
<td>1.50</td>
</tr>
<tr>
<td>Instrumental Stresses</td>
<td>1.14</td>
<td>2.29</td>
<td>1.83</td>
<td>1.34</td>
<td>1.57</td>
<td>1.17</td>
</tr>
<tr>
<td>Total Stresses</td>
<td>2.90</td>
<td>5.44</td>
<td>4.83</td>
<td>3.35</td>
<td>3.86</td>
<td>2.67</td>
</tr>
<tr>
<td>Chance Control</td>
<td>22.68</td>
<td>27.47</td>
<td>29.42</td>
<td>23.28</td>
<td>23.96</td>
<td>30.50</td>
</tr>
<tr>
<td>Powerful Other Control</td>
<td>19.90</td>
<td>26.44</td>
<td>33.75</td>
<td>22.15</td>
<td>19.26</td>
<td>24.50</td>
</tr>
<tr>
<td>Internal Control</td>
<td>35.41</td>
<td>32.00</td>
<td>29.67</td>
<td>34.89</td>
<td>35.34</td>
<td>34.83</td>
</tr>
<tr>
<td>Self Depression Assessment</td>
<td>92.31</td>
<td>117.78</td>
<td>137.08</td>
<td>97.33</td>
<td>105.00</td>
<td>106.67</td>
</tr>
<tr>
<td>Teacher Depression Assessment</td>
<td>102.95</td>
<td>109.64</td>
<td>100.56</td>
<td>98.09</td>
<td>118.26</td>
<td>133.33</td>
</tr>
</tbody>
</table>

Table 4.4: Means for Participants on Variables of Interest, by Level Of Depression

All student participants in this study completed a depression self-assessment using the DAYS rating scale. In addition, 60 percent of those students were assessed by one or more of their classroom teachers using the teacher version of the DAYS. For the purposes of this study all depression ratings (teacher and student) were divided into one
of three possible categories: Not Depressed; Mild Depression; and Moderate/Severe Depression. Again, these categories represent level of observed or reported depressive symptoms, and not an actual diagnoses. A reporting of how students from each of these descriptive categories compare on the variables of interest for our study is available in Table 4.4.

Data on Research Questions

The preceding data were presented in order to provide some basic information about the variables which were collected in this study. In the following section, information pertaining to the ten research questions which guided this study are presented.

Research Questions #1

How does the prevalence rate for Magnet school students compare to the levels seen in other groups of students?

In Table 4.5 we see that 29% of magnet school students self-reported levels of depression which were considered significant (standard score of 115 or greater). In comparing this with the other student populations which were also assessed using the DAYS rating scale, the percentage of magnet school students who self-reported significant levels of depression exceeded the rates seen in regular education students by 14%; the rate in conduct disordered students by 7%; and the rates in learning disabled children by 11%. When teacher versions of the DAYS were compared, magnet school
students eclipsed the levels of significant depression seen in regular education students (by 11%) and learning disabled students (by 6%). However, teachers of conduct disordered students in the Newcomer, Barenbaum, and Pearson (1995) rated 38% of their students as displaying significant levels of depressive symptoms, which exceeded the 24% seen in this study by 14%.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnet School Study</td>
<td>101.89</td>
<td>29</td>
<td>102.58</td>
<td>24</td>
</tr>
<tr>
<td>Regular Education (1)</td>
<td>100.75</td>
<td>15</td>
<td>101.4</td>
<td>13</td>
</tr>
<tr>
<td>Conduct Disordered (1)</td>
<td>100.96</td>
<td>22</td>
<td>110.97</td>
<td>38</td>
</tr>
<tr>
<td>Learning Disabled (1)</td>
<td>103.72</td>
<td>18</td>
<td>108.9</td>
<td>18</td>
</tr>
</tbody>
</table>


Table 4.5: Rates of Problematic Depressive Symptoms for Various Student Groups

Research Questions #2

What level of agreement exists between self-reports and teacher ratings of students’ level of depressive symptoms?

In the study detailed here, 11 teachers generated 154 student ratings on 123 students. This resulted in 31 students being rated by two of their teachers, while all other students were rated by only one. Each of these 154 ratings collected fell into one of four categories: Teacher and student both indicating depression (8 total, 5.2%); Teacher
indicating depression but not the student (24 total, 15.6%); Student indicating depression but not the teacher (18 total, 11.7%); and both student and teacher failing to indicate significant levels of depression (104 total, 67.5%).

In order to determine the degree to which student self-reports of depression are reflective of the ratings given by their teachers, individual student/teacher results were analyzed and a level of agreement determined. These results are reported in Table 4.6. In this study, the highest level of agreement existed when significant depressive symptoms were absent. Specifically, there was an 81% chance that a student who did not self-report a significant level of depressive symptoms would also fall within the normal range on the teacher version. Conversely, 19% of students who failed to self-report significant levels of depressive symptoms were identified by their teachers as displaying significant depressive symptomology. When a student did self-report significant levels of depression, there was a 31% chance that one of his/her teachers would also report significant symptoms. This means that 69% of students who self-reported significant levels of depression were judged by their teachers to be displaying an average to below average level of depressive symptoms.

Finally, while the mean standard scores of the 203 student self-reports (101.89) and the 154 teacher reports (102.58) are very similar, this should not be interpreted to mean that individual scores were typically commensurate. Rather, a mean variation of slightly greater than one standard deviation (15.5 points) was observed between self-report and teacher report forms.
<table>
<thead>
<tr>
<th>Magnet School Study</th>
<th>Teacher Indicates Significant Depression</th>
<th>Teacher Does Not Indicate Significant Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Indicates Significant Depression</td>
<td>31% (8)</td>
<td>69% (18)</td>
</tr>
<tr>
<td>Student Does Not Report Significant Depression</td>
<td>19% (24)</td>
<td>81% (104)</td>
</tr>
</tbody>
</table>

Table 4.6: Agreement Between Teacher and Student Depression Ratings

<table>
<thead>
<tr>
<th>Newcomer, Barenbaum, and Pearson Study (1995)</th>
<th>Teacher Indicates Significant Depression</th>
<th>Teacher Does Not Indicate Significant Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Indicates Significant Depression: Regular Education Students</td>
<td>28%</td>
<td>72%</td>
</tr>
<tr>
<td>Student Does Not Report Significant Depression: Regular Education Students</td>
<td>9%</td>
<td>91%</td>
</tr>
<tr>
<td>Student Indicates Significant Depression: Learning Disabled Students</td>
<td>47%</td>
<td>53%</td>
</tr>
<tr>
<td>Student Does Not Report Significant Depression: Learning Disabled Students</td>
<td>11%</td>
<td>89%</td>
</tr>
</tbody>
</table>

Table 4.7: Agreement Between Teacher and Student Depression Ratings in Newcomer, Barenbaum, and Pearson (1995) Study (Provided for Purpose of Comparison)

**Research Question #3**

**Do any significant racial or economic group differences exist in student’s self-reporting of depressive symptoms?**

In reviewing results from a two-way analysis of variance (presented in Table 4.8) which investigated potential group differences in students’ self-reporting of depressive symptoms.
symptoms based on racial and economic variables, we find that a significant interaction effect did not occur. This allowed for an interpretation of main effects, on which a significant between group difference was found based on SES (F=4.59). This findings tells us that the DAYS self-assessment mean of 104.54 for the 142 students who did not participate in the free/reduced lunch program was significantly greater than the mean of 95.74 for the 61 student participants who were eligible for the program. In contrast, the obtained F of 1.56 on the variable of race did not meet the criteria for significance, suggesting that significant variation did not exist between the three racial categories on the variable of depression self assessment.

<table>
<thead>
<tr>
<th>Source</th>
<th>Df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td>2</td>
<td>1056.821</td>
<td>528.410</td>
<td>1.516</td>
<td>.222</td>
</tr>
<tr>
<td>SES</td>
<td>1</td>
<td>1599.697</td>
<td>1599.697</td>
<td>4.590</td>
<td>.033</td>
</tr>
<tr>
<td>Race*SES</td>
<td>2</td>
<td>79.496</td>
<td>39.748</td>
<td>.114</td>
<td>.892</td>
</tr>
<tr>
<td>Error</td>
<td>197</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>202</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.8: Two Way Analysis of Variance: Race * SES
Research Question #4

When divided into groups based on personal (gender, race, attitude) and professional characteristics (years experience, training), do any significant differences exist in the rate at which teachers’ identify significant depressive symptoms in their students?

Table 4.9 provides an overview of various categories into which each of the 11 teachers participants fall. All teachers were divided into groups based on gender, race, experience, depression training, and attitude regarding adolescent depression. Attitude was measured by asking teachers the degree to which they agree with the following statement: “I believe that adolescent depression is a serious problem in American high schools which needs to be addressed by our educational system.” The majority of participants either agreed (n=6; 55%) or strongly agreed (n=4; 36%) with the previous statement, while one participant (9% of sample) slightly disagreed with the statement.

Independent samples t-tests were conducted to determine if any variables seemed to influence the rate at which teachers reported their students as showing significant signs of depression. The dependent variable for these t-tests therefore was the percentage of students identified as showing significant levels of depression. In terms of gender, we see that males in the study were less likely to rate students as being depressed than were females (t(df=9)= -2.460, p<.05) by an average of 23%. Racially, the mean group difference between African American and Caucasian teachers of 6.5% was not
<table>
<thead>
<tr>
<th>Teacher Groups (n)</th>
<th>Mean Percentage Depressed</th>
<th>Mean Percentage Non-Depressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender: Male (3)</td>
<td>3</td>
<td>97</td>
</tr>
<tr>
<td>Gender: Female (8)</td>
<td>27</td>
<td>73</td>
</tr>
<tr>
<td>Race: African American (3)</td>
<td>25</td>
<td>75</td>
</tr>
<tr>
<td>Race: Caucasian (8)</td>
<td>19</td>
<td>81</td>
</tr>
<tr>
<td>Experience: 0-5 years teaching (6)</td>
<td>29</td>
<td>71</td>
</tr>
<tr>
<td>Experience: 11+ years teaching (4)</td>
<td>12</td>
<td>88</td>
</tr>
<tr>
<td>Training: Depression Training (6)</td>
<td>26</td>
<td>74</td>
</tr>
<tr>
<td>Training: No Depression Training (5)</td>
<td>14</td>
<td>86</td>
</tr>
<tr>
<td>Attitude: Strongly Agree (4)</td>
<td>36</td>
<td>64</td>
</tr>
<tr>
<td>Attitude: Agree (6)</td>
<td>13</td>
<td>87</td>
</tr>
</tbody>
</table>

Table 4.9: Mean Percentage of Students Falling into Depressed/Non-Depressed Categories by Teacher Groups

considered statistically significant \(t(df=9)=.539\). Participation in training on the topic of adolescent depression did not significantly impact teacher ratings \(t(df=9)=-1.121\), nor did years of experience \(t(df=9)=1.241\). The strongest group difference was observed based on attitude, where the 4 teachers who strongly agreed with the notion that adolescent depression is serious concern requiring attention from the school identified 36% of their students as showing significant signs of depression, whereas 13% of
students rated by teachers who agreed with that statement were classified as significant on the teacher version of the DAYS. These results suggest that gender and attitude are the two measured variables with the greatest impact on teacher ratings.

Research Question #5

What, if any, school related (e.g. attendance, grade point average) factors correlate with student and teacher ratings of depression?

In an effort to determine what, if any, quantifiable relationship exists between the presence of high levels of depressive symptoms and the variables of GPA and student absences, a Pearson correlation coefficient was determined. Results from this analysis are available in Table 4.10. On the student version of the DAYS we see that correlations between depression ratings and GPA and absences fail to meet the criteria used in this study (alpha=.01). Specifically, a weak correlation of -.142 (r²=.02) was observed with depression and GPA, similar to the correlation of .165 (r²=.027) between depression and absences.

Statistically insignificant relationships were also noted on the teacher version of the DAYS, where a weak correlation of -.162 was observed between depression and GPA, and virtually no relationship (r= -.030) was noted between depression and absences. These findings suggest that, contrary to information obtained from studies with other student populations (e.g. Cullinan, Scholss, & Epstein, 1987; Maag and Rutherford, 1988), the presence of depressive symptoms in magnet school students is not strongly linked to lower GPA and increased absences.
Table 4.10: Correlations Table

<table>
<thead>
<tr>
<th></th>
<th>Self Assess (n=203)</th>
<th>Grade Point Average (n=203)</th>
<th>Absences (n=203)</th>
<th>Total Life Stress (n=203)</th>
<th>Chance Control (n=203)</th>
<th>Powerful Other Control (n=203)</th>
<th>Internal Control (n=203)</th>
<th>Teacher Assess (n=154)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Assessment</td>
<td>1</td>
<td>-.142</td>
<td>.165</td>
<td>.555*</td>
<td>.477*</td>
<td>.637*</td>
<td>-.386*</td>
<td>.202</td>
</tr>
<tr>
<td>Grade Point Average</td>
<td>-.142</td>
<td>1</td>
<td>-.209*</td>
<td>-.273*</td>
<td>-.105</td>
<td>-.026</td>
<td>-.016</td>
<td>-.162</td>
</tr>
<tr>
<td>Absences</td>
<td>.165</td>
<td>-.209*</td>
<td>1</td>
<td>.280*</td>
<td>.188*</td>
<td>.093</td>
<td>-.164</td>
<td>-.030</td>
</tr>
<tr>
<td>Total Life Stress</td>
<td>.555*</td>
<td>-.273*</td>
<td>.280*</td>
<td>1</td>
<td>.322*</td>
<td>.440*</td>
<td>-.202*</td>
<td>.060</td>
</tr>
<tr>
<td>Chance Control</td>
<td>.477*</td>
<td>-.105</td>
<td>.188*</td>
<td>.322*</td>
<td>1</td>
<td>.588*</td>
<td>-.151</td>
<td>.159</td>
</tr>
<tr>
<td>Powerful Other Control</td>
<td>.637*</td>
<td>-.026</td>
<td>.093</td>
<td>.440*</td>
<td>.588*</td>
<td>1</td>
<td>-.313*</td>
<td>.031</td>
</tr>
<tr>
<td>Internal Control</td>
<td>-.386*</td>
<td>.016</td>
<td>-.164</td>
<td>-.202*</td>
<td>-.151</td>
<td>-.313*</td>
<td>1</td>
<td>-.008</td>
</tr>
<tr>
<td>Teacher Assess</td>
<td>.202</td>
<td>-.162</td>
<td>-.030</td>
<td>.060</td>
<td>.159</td>
<td>.031</td>
<td>-.008</td>
<td>1</td>
</tr>
</tbody>
</table>

* Correlation is significant at .01 level (2-tailed)

Research Question #6

To what degree is exposure to traumatic life events correlated with adolescent depression?

Pearson correlation coefficients were generated to determine the extent of the relationship between depressive symptoms and stressful life events, with results available in Table 4.10. A significant Pearson correlation coefficient was found between students’ self-reporting of depressive symptoms and their self-reports of stressful life events. The strongest correlation was observed with the students DAYS self assessment and total life stress score (r²=.31). In addition, significant and relatively similar correlations were also
noted when life stresses were further broken down into interpersonal (r²=.20) and instrumental (r²=.24). In contrast, almost no relationship (r²=.004 for total life stress) was observed between teacher depression ratings and student reports of stressful life events. These results indicate that while the experience of stressful life events is significant in a student’s self-reporting of depressive symptoms, teachers do not observe (or take into account) these events when estimating the presence of depression in students.

Research Question #7

To what degree is locus of control correlated with adolescent depression?

Pearson correlation coefficients were generated to determine the extent of the relationship between depressive symptoms and stressful life events, with results available in Table 4.10. Significant Pearson Correlation Coefficients were observed when examining the relationship between students’ self-reporting of depression and the results from their locus of control measure. The strongest relationship existed between depression self assessment and results from the Powerful Other component of the LOC measure (r²=.41), followed by the correlation between depression self-report and chance control (r²=.23). A significant but weaker negative correlation was observed between self-reports of depression and internal locus of control (r²=.15). As expected, these results suggest a link between the presence of depressive symptoms and a locus of control which is more external in nature.
Significant Person Correlation Coefficients were not seen when the variables of teacher depression assessment and locus of control were examined. The strongest correlation of .159 ($r^2=.025$) for teacher depression score and chance control fell below the criteria for significance ($\alpha=.01$). Furthermore, virtually no relationship was observed between teacher depression score and internal ($r=-.005$) and powerful other ($r=-.018$) control. These findings indicate that teachers’ assessments of student depression are not related to a student’s locus of control.

**Research Question #8**

**Do any significant gender, economic, or racial group differences exist in students’ self-reporting of locus of control?**

Three-way ANOVA’s were conducted on the locus of control domains (internal, chance, powerful other) and the variables of race, gender, and SES. Results failed to show significant interactions ($\alpha=.05$) between these variables and the students’ reporting of chance control and powerful other control. In addition, further analyses failed to uncover significant main effects for any of these variables on powerful other and chance control. However, when internal control was analyzed, a significant three-way interaction was observed ($p=.005$). This indicates that the pattern of racial and gender scores for internal control differ when SES is considered is well. A review of the information displayed in Chart 4.2 indicates that, in general, the attribution placed on internal control is slightly elevated in the free/reduced lunch group in comparison to the regular lunch students. However, the response pattern differs when race and gender are
included. For students in the regular lunch category, the two highest mean scores were reported by Caucasian males (35) and African American Females (34), whereas females classified as Caucasian (40) and Other (40) topped the free and reduced lunch group, followed by African American Males (38).

![Internal Locus of Control Chart](chart.png)

Chart 4.2: Internal Locus of Control Means by Race, SES, and Gender

Whenever a significant three-way interaction is observed, two-way interactions and main effects must be interpreted with caution. Keeping this in mind while reviewing the other generated F scores, it is noted that only the SES main effect ($F=5.972$) exceeds the level selected for significance ($\alpha=.05$). When all this information is taken into account it can be said that, in general, student participants in this study who were eligible for the free/reduced lunch program were more likely to ascribe importance to internal
factors on the events/outcomes in their lives than were their peers who were not eligible for the program. However, the racial and gender patterns of response vary greatly between these two SES groups.

Research Question #9

What, if any, school related (e.g. attendance, grade point average) factors correlate with students’ self-ratings of Locus of Control?

Results presented in Table 4.10 generally suggest very weak correlations between locus of control self reports and scholastic correlates of GPA and attendance. In fact, only the relationship between chance control and absences was considered statistically significant (alpha=.01), though this correlation itself was not particularly strong (r2=.035). These results suggest that the variables of GPA and student attendance are not strongly related to a student’s locus of control.

Research Question #10

To what degree is exposure to traumatic life events correlated with adolescent’s self reporting of Locus of Control?

Information presented in Table 4.10 indicated statistically significant relationships between student’s self-reports of both stressful life events and locus of control. Significant negative correlations were observed between scores on the internal locus of control domain and interpersonal life stress (r2=.04) and total life stress (r2=.04), while the relationship between internal control and instrumental life stress did not meet the
criteria for significance ($r^2=.01$). When the domain of chance control was considered, significant relationships were observed in relation to self-reports of interpersonal ($r^2=.08$), instrumental ($r^2=.06$), and total life stresses ($r^2=.10$). The strongest relationships were observed in the area of powerful other control, with correlations of .390 ($r^2=.15$) for interpersonal stresses, .333 ($r^2=.11$) for instrumental stress, and .440 ($r^2=.19$) for total life stresses. These results suggest a direct relationship between negative events in a student’s life and the extent to which that student externalizes responsibility for the events/outcomes in their lives.

Data on Counseling Intervention

<table>
<thead>
<tr>
<th>Group (number of students)</th>
<th>Depression SS#1: Group Mean</th>
<th>Depression SS#2: Group Mean</th>
<th>Change</th>
<th>Significant Depression (SS #2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control (6)</td>
<td>127</td>
<td>120</td>
<td>- 7</td>
<td>5/6 (83%)</td>
</tr>
<tr>
<td>Treatment (9)</td>
<td>131.1</td>
<td>97.8</td>
<td>- 33.3</td>
<td>3/9 (33%)</td>
</tr>
</tbody>
</table>

Table 4.11: Group Means for Depression Treatment and Control Groups

In an effort to determine the potential utility of short term, school based counseling for students who were self-reporting significant levels of depression and/or suicidal ideation, a small number of students participated in pilot intervention study. Fifteen students were involved in this examination, with 9 students in the treatment condition and six students comprising the control group. The key variable which separated students who were selected for the treatment condition was their response to
the item on the DAYS scale which referenced thoughts of suicide. The nine students in this study who reported having suicidal thoughts “often” or “all the time” met with the primary researcher individually from one to four sessions, with the number of sessions being determined by both severity of the problem and student willingness to participate in counseling. The six students who comprised the control group were students who self-reported significant levels of depression, but indicated having suicidal thoughts “never” or “sometimes”. Pre- and post- intervention DAYS self-reports were utilized on both treatment and control students. An analysis of descriptive statistics (combining both treatment and control groups) indicated that the 15 total depression self-reports collected during the first assessment yielded standard scores which ranged from 105-150, with a mean of 129.33 and a standard deviation of 13.07. Standard scores collected following the intervention period ranged from 75-125, with a mean of 106.67 and a standard deviation of 22.07.

When dividing the participants into their respective groups, the control population had an average standard score of 126.67 (range 120-135) with a standard deviation of 6.06 on the first administration of the DAYS. This was followed by a mean of 120 (range 110-125) on the second administration, with a standard deviation of 6.32. The mean difference for the control group on these two administrations was 6.67 (range 0-10; SD=4.08). For the nine students who participated in the treatment condition, standard scores on the initial administration ranged from 105-150, with a mean score of 131.11 and a standard deviation of 16.35. Depression standard scores ranged from 75-125 on the post-intervention ratings, with a mean of 97.78 and a standard deviation of 18.73. This
resulted in a mean drop of 33.3 points in standard scores from the first to the second DAYS administration, ranging from 0-70 points (SD=23.95). When looking at mean differences between the groups it is noted that the treatment group had a mean standard score which was 4.44 points greater than the control group, while the mean depression standard score for the control group was 22.22 points higher than 97.78 average seen in the treatment condition.

One-way ANOVA's were conducted to compare the treatment and control groups on three variables: depression self-report (initial measure and follow-up measure), and the degree to which each groups scores dropped between ratings. An obtained F of .398 indicated that the standard scores for the first administration of the DAYS did not differ between the two groups. In contrast, the results form the six week follow-up rating indicated that the control group had significantly higher scores (F=7.689). And while the mean overall scores of each group fell from the first to the second administration of the DAYS, the decrease in the treatment groups scores were significantly greater than in the control group (F=5.985). These results suggest that students in the control and treatment groups expressed similar levels of depressive symptoms during the initial administration of the DAYS. However, on a second administration of the DAYS conducted six weeks later, students who received counseling self-reported significantly less symptoms. Furthermore, a significant decrease in suicidal ideation was noted for the treatment group. Data on individual participants is available in Appendix J.
CHAPTER 5

DISCUSSION

The underlying purpose of this study has been to improve our understanding of adolescent depression in magnet school students. In an effort to achieve this goal it was imperative to develop an estimate of how prevalent symptoms of depression are in this population, and to understand internal and external variables which relate to the presence of significant depressive symptoms. Furthermore, the process of identifying and treating magnet school students who are experiencing significant levels of depression has been outlined and the results detailed. With this information at hand we now begin a discussion of the implications of this project to the efforts of concerned school based professionals who wish to effectively address the problem of adolescent depression in general, and specifically those individuals who strive to meet the unique needs of magnet school students.

Key Findings

**Significant depressive symptoms are more common in magnet school adolescents than in most other subpopulations of students.**
Chart 5.1: Depression Prevalence Rates for Magnet School Students Compared to Other Student Groups

Chart 5.1 shows the percentage of depression ratings (student and teacher) in this and other studies which met or exceeded the criteria for significance (DAYS standard score of 115 or greater). For the purpose of comparison, results from the Newcomer, Barenbaum, and Pearson Study (1995), which used the DAYS to assess various student groups, are included in the chart. This comparison illustrates the concern for the emotional well-being of magnet school students which results from this study have raised. Specifically, 29% of the student self-reports and 24% of teacher assessments
suggested a level of depression which was considered significant and thereby classified as either mild, moderate, or severe on the DAYS scale. This self-report percentage is higher than the rates seen in groups of regular education, learning disabled, and conduct disordered students, while the percentage of teacher assessments classified as significant exceeded that which was observed in regular education and learning disabled students. Prevalence rates such as these suggest that magnet school adolescents are a student group which is highly susceptible to depression.

**Depressed magnet school adolescents have certain experiences and personality traits which differ from their non-depressed peers.**

Results from this study would suggest that depression is not a condition which occurs in isolation, but rather is closely related to a constellation of psychological and experiential variables. The inclusion of the locus of control component of this study allowed insight into the worldview of the depressed adolescent. It was noted that depressed students attribute more of the events and outcomes in their lives to the forces of chance and the actions of powerful others than do students who do not display significant levels of depression. Closely related is the finding that depressed adolescents see less of the events and outcomes in their life as related to their own attributes and actions than do students who report average levels of depressive symptoms. This information increases our understanding of the depressed adolescent, and is valuable given research which suggests the efficacy of attribution retraining. More specifically, this finding suggests that interventions aimed at helping students to develop a locus of
control which is more internal in nature may be an effective way to minimize the risks for developing depression.

As noted in the introductory chapter of this dissertation, a student’s experiencing of depression may in large part be a reaction to difficult circumstances in their lives. Supporting this supposition is the finding that self-reports of depression are highly correlated with student reports of stressful life events. Out of ten stressful life events which were listed for the student to select from, student in the mild range of depression indicated experiencing an average of 5.44 stressful life events in the past year, which was 88% higher than the 2.9 average for students in the non-depressed range. Students in the moderate to severe range of depression also reported an average score, 4.83, which was significantly higher than students in the non-depressed range. A Pearson Correlation Coefficient of .555 for depression self-assessment and total stressful life events provides further evidence for the strong link between depression and life stress. Also interesting to note is the lack of such a correlation between depression and life stress on the teacher version of the DAYS (r=.042). This finding can be interpreted in different ways. One theory would be that teachers are aware of events in their students lives but fail to account for these when providing an assessment of the child’s emotional well being. A second theory would be that teachers are not cognoscente of the interpersonal and instrumental stresses with which their individual students are confronted. In the researchers’ opinion, the most likely explanation would be that students who experience stressful life events internalize these pains and do not manifest them in behaviors which are observed by teachers.
Most readily observable characteristics of magnet school adolescents are not useful in identifying students who are at risk for depression.

The impetus for collecting as much information about the students in this study as possible was the hope of uncovering characteristics of depressed magnet school adolescents which were easily identifiable. However, this was not the case. In fact, depression may be more difficult to detect in this population than in other student groups. In particular, we find that depressed magnet school adolescents are generally good students, who attend school regularly and achieve at a level which is not dissimilar to that of their non-depressed peers. So whereas studies with other student populations have found significant negative correlations between depression and grades/attendance, such a relationship does not appear to exist with magnet school students. Therefore, lower grades and higher absence rates are not necessarily a “red-flag” suggesting the need for an assessment of the child’s emotional well-being. The same can be said for the variable of race, as different groups report very similar levels of depressive symptoms. And while an analysis of variance indicated that students whose family socioeconomic status would be considered adequate or above (as evidenced by the child not being eligible for the free/reduced lunch program) self-reported significantly higher levels of depressive symptoms, it would seem short-sighted to suggest that students of poverty are less vulnerable to experiencing depression. Rather, this finding should be interpreted as suggesting that the absence of significant financial strain is by no means a protective element against depression.
Teachers are currently not able to adequately identify depression in their students.

Results from this study showed that 70% of the time teachers failed to identify as depressed students who self-reported significant levels of depression. This low rate of agreement was not unexpected given similar findings in other studies. This study therefore lends support to the notion that relying on teachers to identify students who may require services for depression is inadequate.

Results from the study do however suggest that teachers are aware of the problem of adolescent depression, and furthermore believe that it is appropriate for the schools to try and help afflicted students. Given this support it could be argued that school psychologists should provide training to teachers on understanding and identifying adolescent depression. Furthermore, the majority of students who were identified by teachers as showing symptoms of depression has failed to self-report significant levels, suggesting that teacher input is valuable in locating students who may be reluctant to report feelings of depression on their own.

A students locus of control is reflective of their experiences, and has consequences for their psychological well-being.

Locus of control does not develop in isolation, as evidenced by the strong correlation between locus of control and stressful life events. It is not surprising that students who have experienced multiple negative events would begin to doubt their ability to influence the events and outcomes in their life. And this sense of being
disenfranchised often leads to the development of depression, as evidenced by the strong correlations between self-reports of depression and a locus of control which is external in nature ($r=.637$ for powerful other control; $r=.477$ for chance and control; $r=-.386$ for internal control). We do however know that interventions which focus on attribution retraining can be effective. As the problem of adolescent depression appears to be so widespread, the use of attribution retraining via class-wide lessons and activities may be an appropriate means for trying to address or even prevent depression.

**The impact of stressful life events can be seen in virtually all areas of student functioning.**

In looking at the information provided in Table 5.2, it is noted that a student’s reported stressful life events relates to all other non-fixed student variables utilized in this study. These include elements which are internal to the individual (depression, locus of control), as well as those which are more readily observable (GPA, Grade Point Average). By comparison, depression self-assessments failed to correlate with academic factors. However, such correlations are not evident on teacher version of the DAYS. Table 5.2 and Chart 5.2 further illustrate the relationship between stressful life events and grades, attendance, and depression self-ratings.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Total Life Stress</th>
<th>Depression Self Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total life Stress</td>
<td>1.00</td>
<td>.546</td>
</tr>
<tr>
<td>Depression Self Assessment</td>
<td>0.546</td>
<td>1.00</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>Powerful Other Control</td>
<td>0.425</td>
<td>0.591</td>
</tr>
<tr>
<td>Chance Control</td>
<td>0.321</td>
<td>0.452</td>
</tr>
<tr>
<td>Internal Control</td>
<td>-0.197</td>
<td>-0.326</td>
</tr>
<tr>
<td>Absences</td>
<td>0.271</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Grade Point Average</td>
<td>-0.240</td>
<td>Not Significant</td>
</tr>
</tbody>
</table>

Table 5.1: Significant Correlations for Total Life Stress and Depression Self Assessment

When the effort to serve the needs of students who are experiencing depression is considered, these findings are important in that they underscores the need for schools to be aware of the events in their students lives. This could be accomplished by encouraging parents to keep teachers/administrators informed of significant life stresses with which their students may be faced. Another approach would be providing students with a regular outlet to share the events in their lives with various members of the school staff. In short, asking the students how their lives are going may be the easiest and most effective means for identifying students who, by virtue of the high number of stressful life events which they are enduring, are at a heightened risk for depression.
Brief, school based individual therapy appears to be an effective means for lessening or alleviating student depression and suicidal ideation.

Results from the counseling component of this study showed students who participated in even one assessment/counseling session with a school psychologist indicated lower levels of depressive symptoms and reported less suicidal ideation on a second administration of the DAYS. This information was obtained by comparing the initial depression assessment scores to the results obtained during a six week follow-up rating. In contrast to the dramatic improvement seen in the treatment group, the six students comprising the control group showed insignificant drops in self-reported levels of depression. A representation of the effectiveness of the counseling intervention is presented in Chart 5.3.
Equally as encouraging as the drop in depression scores was the significantly lower rates of suicidal ideation reported on the post-measure. Recall that students were selected for inclusion in the treatment group based on self reports of having thoughts of suicide "often" or "all the time", while students with similar levels of depression but a lower frequency of suicidal thoughts were placed in the control group. While all nine of the treatment students expressed significant levels of suicidal ideology during the initial rating, only 2 students expressed these high levels on the post-measure. Furthermore, the mean score for the treatment group on the suicide question from the DAYS was lower than the average score for the control group (1.77 versus 1.83 on a 4 point likert scale), which had remained unchanged from the first assessment.
Exactly why this short term approach was so effective is open to ideological debate. It is possible that the students in the treatment group were motivated by factors other than their actual level of depression to present more positively on the follow-up rating (i.e. please the researcher, avoid further counseling sessions). It is also possible that the students took to heart some of the suggestions made during their counseling session(s) and subsequently made positive life changes which served to reduce levels of depression and suicidal ideation. Another explanation is that the student's experience of having their feelings recognized and validated by a concerned adult, who allowed a forum for the child to express and normalize emotions which may not have previously been disclosed, proved to be therapeutic for the student in and of itself.

**Recommendations**

**School wide programming should be provided for all students on the topic of adolescent depression.**

Information on the prevalence rates for depression in magnet school students, including 29% of student self-reports and 24% of teacher assessments, suggests that adolescent depression is widespread in this population. Such high rates of occurrence complicate efforts to provide individual services to all students who may require it. Therefore, it is recommended that efforts be made to provide preventative programming for all magnet school students. These efforts could include presentations designed to do the following: educate students about the topic; help adolescents recognize symptoms in themselves or their peers; discuss techniques which students can use on their own should
they find themselves feeling depressed; and increase awareness of school and community resources which are available to teens who feel they may need professional help. Providing these sessions could also allow students to ask questions and share concerns with individuals who are knowledgeable on the topic. Such interactive presentations could be conducted in classroom groups and led by school psychologists or school counselors.

**Training should be provided for teachers and administrators on adolescent depression.**

One of the interesting findings from the analysis of teacher responses was the impact of a teacher’s attitude on their assessment of student depression. Specifically, teachers who “strongly agreed” that adolescent depression is a concern which needs to be addressed by the schools identified significantly more students as showing signs of depression that did other teachers (see Table 4.9). It is possible that further educating teachers and administrators on the prevalence and related problems of adolescent depression would then lead more teachers to support depression assessment and intervention efforts in the school. Also, especially in situations where standardized, school wide depression assessments which include teacher input are not being used, providing teachers with knowledge about adolescent depression may increase the likelihood that a depressed student would be referred to a school psychologist or other professional.
Positive attribution training should be incorporated into the curriculum.

In an effort to better understand the psychological characteristics of depressed magnet school adolescents, this study uncovered significant correlations between depression and locus of control. Specifically, student’s who placed a greater emphasis on internal contributions to the events/outcomes in their lives reported lower levels of depressive symptoms than did students who emphasized the impact of chance events and the actions of powerful others. Encouraging students to recognize and appreciate the impact of their decisions and behaviors on their lives may improve student functioning, while simultaneously lowering the risk for depression. Implementation of such programming on a school-wide level would require administrative support to be implemented, and teacher support to be meaningful. This again speaks to the need for school psychologists to be involved in educating staff members on the emotional needs of students. The development of such curricula should be completed with the assistance of school psychologists, and should reflect and possibly build upon approaches which have proven to be effective in helping students to develop an internal locus of control (i.e. Schulte, 1988; Benson & Deeter, 1992).

Communication between students/families and schools should be increased.

The number of stressful life events experienced by a student over the past year correlated with all other non-fixed student variables in this study, including personal (i.e. reported depression, locus of control) and scholastic (attendance, GPA) factors. This suggests that students who have experienced a number of difficulties over the past 12
months are more susceptible to personal and academic difficulties than are their peers with less exposure to life trauma. While this is a valuable piece of information, it lacks practical significance if schools continue to be unaware of their student’s personal trials. Of course, student and family privacy needs to be respected, and educational institutions are not encouraged to make an obtrusive overtures into the personal lives of their students. Rather, schools should consider making efforts to alert parents of the influence of stress on student performance and well-being, and to encourage families and students to make school personnel aware of significant issues which arise in a teen’s life. Such information could help school psychologists and other faculty members to identify and provide support/assistance to students who, by virtue of their exposure to extreme or repeated life trauma, are at a heightened risk for adolescent depression.

The use of standardized assessment procedures must be considered Best Practices for the identification of depressed students.

By utilizing student and teacher ratings, and incorporating numerous variables into the overall analysis of adolescent depression, this study attempted to identify the most effective and efficient means for identifying depression in adolescents. And while certain variables were identified which place magnet school students at a higher risk for expressing significant depressive symptoms (i.e. external locus of control, stressful life events), no readily observable student traits were identified which would suggest that depressed students can be reliability identified through means other than standardized assessment instruments. In addition, the disparity between student and teacher
assessments suggests that use of only one rating source (student or teacher) will result in a number of depressed students failing to be identified. Therefore, the use of grade level depression screenings for adolescents, incorporating student and teacher assessments, is recommended.

**Increased accessibility of school based mental health professionals to the general student population.**

An encouraging finding from this study was the efficacy of school based intervention, counseling in particular, for the treatment of depressive symptoms and suicidal ideation in teenagers. However, many students go through their high school careers without being aware of services which school psychologists/school counselors can provide for them. Efforts to inform students of the mental health services which are available in schools should be made, and systems developed which make it easy for students to contact service providers. As important is an increased commitment from school districts to provide time, space, and other supports to school psychologists/other professionals to allow for the delivery of effective mental health services.

**Directions for Future Research**

As is inevitably the case with research in the social sciences, the process of conducting and analyzing the results of this project has generated a number of questions which can only be answered with future research efforts. For starters, this investigation represents one of the only systematic investigation of depression and the magnet school
adolescent. As all research was conducted at a single high school in Louisiana, the findings reported here should be supported by studies in other regions before the results are generalized to magnet school students as a group.

The recommendations section of this Chapter made a number of suggestions which, while based on the findings from this study, lack strong empirical backing. The suggested implementation of depression programming for students and teachers, the use of attribution training, and improvements in home/school collaboration are suggested for addressing adolescent depression based on theory more than data. Therefore, investigations of the effectiveness of such approaches are needed in order to strengthen (or dispute) the case for their implementation. Finally, further research into the utility of short-term school based counseling for affective concerns is recommended. Features which should be incorporated into future studies include larger samples, various structured approaches, and the use of multiple outcome measures to gauge the effectiveness of the intervention.
Appendix A

Questions

From Multidimensional Locus of Control Scale
<table>
<thead>
<tr>
<th></th>
<th>Q.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1. Whether or not I get to be a leader depends mostly on my ability.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>2. To a great extent my life is controlled by accidental happenings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>3. I feel like what happens in my life is mostly determined by powerful people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>4. My behavior will determine my performance in school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>5. When I make plans, I am almost certain to make them work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>6. Often there is no chance of protecting my personal interests from bad luck happenings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>7. When I get what I want, it is usually because I am lucky.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>8. Even if I were a good leader, I would not be made a leader unless I play up to those in a position of power.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>9. How many friends I have depends on how nice a person I am.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>10. I have often found that what is going to happen will happen.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>11. My life is chiefly controlled by powerful others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>12. It is impossible for anyone to predict what my grades will be.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>13. People like myself have very little chance of protecting our personal interests when they conflict with those of powerful other people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>14. It’s not always wise for me to plan out too far ahead because many things turn out to be a matter of good or bad fortune.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>15. Getting what I want means I have to please those people above me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>16. Whether or not I get to be a leader depends on whether I’m luck enough to be in the right place at the right time.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>17.</td>
<td>If important people were to decide they didn’t like me, I probably wouldn’t make many friends.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>18.</td>
<td>I can pretty much determine what will happen in my life.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>19.</td>
<td>I am usually able to protect my personal interests.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>20.</td>
<td>When I graduate depends mostly on other who have power over me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>21.</td>
<td>When I get what I want, it’s usually because I’ve worked hard for it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>22.</td>
<td>In order to make my plans work, I make sure they fit in with the desires of people who have power over me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>23.</td>
<td>My life is determined by my own actions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>24.</td>
<td>It’s chiefly a matter of fate whether or not I have a few friends or many friends.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

Sample Principal Letter
Dear {Insert principal name},

My name is Brad Manning and I am currently completing my doctoral level coursework at the Ohio State University. Starting this Fall I will serve as a School Psychology Intern in your parish during the 2001-2002 academic year. In addition to my regular intern duties, I plan to conduct research relating to depression in high school students. I would like to tell you a little about this project, and ask that you consider allowing your students and teachers to take part in what I believe is an exciting and important research endeavor.

The study I have proposed will investigate the degree to which high school teachers are able to correctly identify symptoms of depression in their students. In addition, the construct of locus of control will be assessed to determine what (if any) relationship exists between that variable and adolescent depression. For the purposes of this project I will need every student who participates to complete two self-assessments, one relating to depression, the other for locus of control. In addition, for every student who completes these forms, one teacher would need to complete a brief rating scale on the student. My preliminary thought is that homeroom teachers would be the most appropriate candidates for this task. A comparison of student and teacher ratings would provide valuable insight into the ability of classroom teachers to identify students who self-report depressive characteristics. The rating forms which I’ve chosen for this project are brief, and the time required for teachers to complete all necessary rating forms for a class of 25 students
should not exceed 1 1/2 hours. In addition, the time required for students to complete both self-reports should not exceed one-half hour.

I recognize that participation in this study involves a commitment of valuable time and energy from both your students and faculty members. However, in addition to contributing valuable information on adolescent depression to the broader educational community, participation in the study will provide you with insight into your own school. While all results from individual teachers and students will remain anonymous, aggregated data for your site will provide data about the prevalence of depression in your student body. In addition, information on the ability of your staff to identify this problem will be made available. This information will be shared with you and (if you choose) your faculty by myself. In addition, I offer to provide your staff with in-service training on the topic of adolescent depression following the completion of this study.

Thank you for taking the time to read this brief overview of the exciting research which will be conducted in your Parish during the upcoming academic year. I ask now that you consider offering your school as a potential research venue. As describing all the details of the project in this space is impossible, you may have questions about the specifics of this project. I would be happy to discuss those with you at your convenience. If you have additional questions about the project, or would like to offer your school as a potential data collection site, please contact me at number or email address listed below. As I know this is a busy time of year for school administrators, I may try to contact you within the next few weeks as well. Again, thank you for your time and consideration.
Appendix C

Sample Parent Letter and Consent Form
To the parents of ninth grade students at __________,

I am writing to inform you of a research project which will be conducted by researchers from the Ohio State University in February of this academic year. All ninth grade students at __________ will have the opportunity to participate in a screening designed to measure symptoms of depression in adolescents. Students in the study will be asked to participate in a 1/2 hour group assessment with their classmates. This assessment will occur during class time; however, students will not be required to make up any of the class time that is spent on the assessment. Any student who does not participate in the assessment may use the class time for a quiet activity of their choice. In addition, most students who participate will be rated by one or more of their ninth grade teachers. Results from this survey will be kept strictly confidential. However, any student whose rating form suggests a dangerous level of depressive symptoms will be contacted for further assessment by the school’s psychological intern. If you have any questions please contact Brad Manning, school psychology intern, at xxx-xxxx, or Dr. Antoinette Miranda, primary researcher, at 614-292-5909. If not, please complete and sign the attached form and have your son or daughter return it to their homeroom teacher.

Thank you for your time and consideration,

Antoinette Miranda, Ph.D.

Bradley J. Manning, M.A
Appendix D

Student Assessment Cover Sheet
And
Life Events Questionnaire
Name: Homeroom:

Gender (Circle One): Male Female

Race (Circle One): African American Caucasian

Other (Please Specify): ________________

**Stressful Life Events Questionnaire**

Please place a check mark next to any of the events or circumstances listed below which have been a source of distress to you since the beginning of this academic year.

<table>
<thead>
<tr>
<th>1) Death of a close friend or relative</th>
<th>6) Difficulties with academics</th>
</tr>
</thead>
<tbody>
<tr>
<td>2) Relationship problems with a boyfriend or girlfriend</td>
<td>7) Trouble adjusting to a new school</td>
</tr>
<tr>
<td>3) Relationship problems with friends</td>
<td>8) Difficulties in an athletic or extracurricular activity</td>
</tr>
<tr>
<td>4) Disagreements between you and your parents</td>
<td>9) Concerns about finances</td>
</tr>
<tr>
<td>5) Conflicts between other members of your family</td>
<td>10) Serious injury or illness</td>
</tr>
</tbody>
</table>

11) Briefly list below any other significantly stressful life events (not listed above) which you may have experienced since the beginning of this academic year.
Appendix E

Teacher information Sheet
Name: 

Primary Curricular Area: 

Gender (Circle One): Male Female 

Race (Circle One): African American Caucasian 

Other (Please Specify): ________________ 

Years of Teaching Experience (counting this year): 

Briefly describe any training which you have received on the topic of depression in children and/or adolescents: 

Please circle the response which best represents your opinion on the following statement: 

I believe that adolescent depression is a serious problem in American high schools which needs to be addressed by our educational system. 

1: Strongly Disagree 2: Disagree 3: Slightly Disagree 

4: Neutral 

5: Slightly Agree 6: Agree 7: Strongly Agree 

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Appendix F
Teacher Letter and Consent Form
To the ninth grade teachers at __________,

I am writing to inform you of a research project which will be conducted by researchers from the Ohio State University in February of this academic year. All ninth grade students at __________ will have the opportunity to participate in a screening designed to measure symptoms of depression in adolescents. In addition, we would like to have each student who participates rated by one or more of their ninth grade teachers. Teachers who choose to participate will be asked to complete ratings on one classroom of students. Each rating form consists of 20 true/false questions, and it is estimated that rating an entire classroom of students should take the teacher between 60 and 90 minutes. Results from this survey will be kept strictly confidential. However, any student whose screening form indicates a dangerous level of depressive symptoms will be contacted for further assessment by the school’s psychological intern. If you have any questions please contact Brad Manning, school psychology intern, at xxx-xxxx, or Dr. Antoinette Miranda, primary researcher, at 614-292-5909. If not, please complete and sign the attached form and have your son or daughter return it to their homeroom teacher.

Thank you for your time and consideration,

Antoinette Miranda, Ph.D.

Bradley J. Manning, M.A
Appendix G
Outline for Teacher Information Meeting
Outline for teacher Training meeting:

1) Short overview of the purpose for this research.
   a) Increase our understanding of factors relating to depression in adolescents.
   b) Determine the degree to which classroom teachers' assessment of student's depressive symptomology matches with student self ratings.

2) Discussion of what participation in this research will involve.
   a) For students, completion of three short rating scales, one to measure symptoms of depression, the other to measure factors which might be related. The principal has requested that the research be completed during ninth grade English classes. All told, less than 1/2 hour of class time should be required to complete these forms.
   b) For ninth grade homeroom teachers who choose to participate, you will be asked to complete a brief depression rating scale for each student in your homeroom, which consists of 20 T/F questions, such as "gets along with other children". Each form should take you about three minutes to complete, and you will be given a period of 5 school days to complete these forms.

3) Voluntary Participation
   a) Participation in this study is completely voluntary, both for you and the students. No student or teacher will be allowed to participate in this research without a signed positive consent form. In addition, there will be no penalty for anyone who chooses not to participate. Only I will know which teachers choose to participate, and will not make your identity known to your principal, other administrators, or your
colleagues. In addition, I ask that you emphasize to your students the voluntary nature of this study when distributing permission slips.

4) Confidentiality

a) All individual student results will remain anonymous, with two exceptions. If the parents wish, they can be informed if their student exhibits mild depressive symptoms. Should the student display moderate or greater levels of depression on either the teacher or student rating scale, or should they indicate a desire to hurt themselves or others, the student and parent will be contacted as soon as possible by the school's psychology intern.

b) Your results will remain confidential as well. Don't let your students know if you are rating them, and please don't discuss your ratings with anyone.

5) Follow-Up

a) Following the collection of data, I will visit all ninth grade homeroom/1st period classes to conduct a lesson on adolescent depression. The purpose of this will be to talk about the symptoms of depression in adolescents, and to discuss ways that students can cope with depression. This presentation will take one hour of your ninety minute class period, and the date can be arranged with the school's psychology intern. In addition to educating the students, this is designed to help "make-up" for the hour or so that teachers who participate in the study will devote to completing rating scales. However, this presentation will be conducted in your class even if you elect not to rate your students.
6) Completion of permission forms

   a) All ninth grade students will have the opportunity to take part in the study, regardless of your decision of whether or not to rate them. I will now distribute a consent form to you. Please sign it and indicate if you wish to participate, don't wish to participate, or would like to speak to me further before deciding. Again, your decision to participate will be known only by you and myself, and I ask that you not discuss your decision with your colleagues. In addition, you may decide not to participate at any time during the study.

   b) I will now distribute the teacher consent forms. Please read them carefully, indicate your decision about participation, and sign the form. You may then fold the form in half and place it in the "Teacher consent" envelope which I will leave on this table. Thank you.
Appendix H
Script for Data Collection with Students
Students:

We are now going to take the next twenty minutes or so of class time for one of two tasks. For those of you who have returned signed permission forms, and I have a list of those students names, you will have the opportunity to take part in the research project being conducted in our school. If you'll recall, this study is looking at symptoms related to adolescent depression, and some of the questions which you will be asked to answer relate to that topic. For those of you who did not return the signed permission form, or who have now decided that they do not wish to take part in the study, you may use this time to work quietly at your seat.

Please remember that your participation in this project is completely voluntary. In a moment I will ask if any of you who returned the permission form, which was signed by you and your parents, no longer wish to participate in this project. Remember, the form you signed gave you the ability to withdraw from the study at any time, and there is no penalty for now choosing not to participate.

In a moment I will begin distributing the three forms that you will be completing today. All three of these forms will ask you for your name. Remember, the information which you report will only been seen by the researcher, and your responses will be kept completely confidential, with a one possible exceptions. If your answers show moderate to high levels of depression, or if your answers suggest that you might be in danger of hurting yourself or others, then you will be contacted by the school’s psychological intern.
to talk in more depth about your depressive symptoms. Following the meeting with the school psychologist intern your parents may be contacted if it is determined that additional services for depression or suicide prevention are needed.

So before we begin the study, is there anyone who has agreed to participate that no longer wishes to take part?

(Teacher marks names of any student who will not be participating on the class roster provided by the researcher, which indicates the students who are eligible to participate).

I will now pass out the first questionnaire. Please do not begin until everyone has an answer sheet, and I have gone over the directions.

(Pass out forms)

Please look at your handout. It asks you to first identify yourself, your homeroom teacher, and your age and gender. Then, the form lists 10 stressful life events. The directions ask you to place a check mark next to any one of these events that you have experienced since the beginning of the school year. Then, at the bottom, if you feel that you have experienced a stressful event since the beginning of the school year that is not covered by the items on the list, then list that event. Please begin filling out this form now, and then turn your paper face down when you have finished.

(Teacher collects forms and places them in a manila envelope marked "Stressful Life Event Questionnaire")
We now will complete the second rating form. Again, please do not begin answering before I go over the instructions with you.

(Pass out the forms)

This sheet will again ask you to write your name at the top. Next, you will see a list of 25 statements. To complete this form, please indicate the degree to which you agree with the statement. A 1 indicates that you strongly agree with the statement, whereas a 6 says that you strongly disagree with the statement. There is a key at the top of the page that tells you exactly what each number means. I now would like you to begin filling out this form, and then turn your paper face down when you have finished.

(Teacher collects forms and places them in a manila envelope marked "Locus of Control")

The final sheet which you will be asked to complete is a depression rating scale. Again, please do not begin answering before I go over the instructions with you.

(Pass out the forms)

You will begin this sheet by placing your name at the top of the paper. Then, you will see a series of statements, the first of which states "I feel sad". For each of these statements, indicate if you feel that way not at all by circling a 1; If you feel that way sometimes, circle a two. If you often feel that way, circle a three. If you feel that way all
the time, circle a four. Please complete this form now, and turn your paper over when you have finished.

(Teacher collects forms and places them in a manila envelope marked "Depression screening")

We are now finished with the screening. If anyone has any concerns about the study, or would like to speak with someone about depression or any other related topic, you may go at anytime during the school day to the guidance office, where Mr. Manning, our school psychologist, is located. He will be willing to speak to any student who has a concern about today’s screening.
Appendix I
Suicide Assessments: Student and Parent
Suicide Assessment

Ten critical questions for students

1. How will you do it? This question allows the counselor to determine if the client has developed a specific plan for killing themselves.
2. How much do you want to die? Students rate their wish to die on a three point continuum.
3. How much do you want to live? Again, can be rated on a three point scale. This is useful in helping the client think of reasons for wanting to live.
4. How often do you have these thoughts? Individuals who think of suicide infrequently are in a lower risk category than are those who ponder it regularly.
5. When you are thinking of suicide, how long do those thoughts stay with you? This question helps the counselor determine the degree to which the student can control their suicidal thoughts.
6. Is there anyone or anything to stop you? This helps the gage the strength of the interpersonal bonds which the student has with parents/friends.
7. Have you ever attempted suicide? Students who have attempted suicide in the past are in a high risk category. Individuals with a history of suicide attempts require ongoing therapy.
8. Do you have a plan? Vague plans for suicide indicate a lower risk factor. Students who have already written suicide notes, have a specific time/date planned for killing themselves, or have begun to give away treasured possessions to friends are at a high risk.
9. On a scale from one to ten, what is the likelihood of you killing yourself? A student’s answer to this question is the clearest signal to the counselor as to whether or not an immediate referral should be made.
10. What has happened that makes life not worth living? Allows for an investigation into the roots of the student’s feelings of desperation/helplessness.
Suicide Assessment

Interview Questions for Parents

1. Has any serious change occurred in your child’s or your families life in the past year?
2. Has your child experienced a particular loss lately?
3. Has your child had any accidents or illnesses without a recognizable physical basis? (Stomachaches, headaches, etc.)
4. Has your child experienced difficulties in sports, school, peer relations, or other areas?
5. Has your child been very self-critical or have you or his/her teachers been critical lately?
6. Has your child made any unusual statements, questions, or jokes to you or others about death or dying?
7. Have there been any changes in your child’s mood or behavior over the past few months?
8. Has your child ever threatened or attempted suicide before?
9. Has any of your child’s friends or family members (including yourself) attempted suicide?
10. How have these last few months been in your life? How have you reacted to your child during this time?
Appendix J
Results from Counseling Intervention
### Individual Results for Control Group

<table>
<thead>
<tr>
<th>Student</th>
<th>Depression SS#1</th>
<th>Depression SS#2</th>
<th>Change</th>
<th>Significant Depression (SS#2)</th>
<th>Suicidal Thoughts #1</th>
<th>Suicidal Thoughts #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>120</td>
<td>110</td>
<td>-10</td>
<td>No</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>C2</td>
<td>135</td>
<td>125</td>
<td>-10</td>
<td>Yes</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>C3</td>
<td>120</td>
<td>115</td>
<td>-5</td>
<td>Yes</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>C4</td>
<td>125</td>
<td>125</td>
<td>0</td>
<td>Yes</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>C5</td>
<td>130</td>
<td>125</td>
<td>-5</td>
<td>Yes</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>C6</td>
<td>130</td>
<td>120</td>
<td>-10</td>
<td>Yes</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>MEAN</td>
<td>127</td>
<td>120</td>
<td>-8</td>
<td>5/6 (83%)</td>
<td>1.83</td>
<td>1.83</td>
</tr>
</tbody>
</table>

### Individual Results for Treatment Group

<table>
<thead>
<tr>
<th>Student (# of Sessions)</th>
<th>Depression SS#1</th>
<th>Depression SS#2</th>
<th>Change</th>
<th>Significant Depression (SS#2)</th>
<th>Suicidal Thoughts #1</th>
<th>Suicidal Thoughts #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1 (1)</td>
<td>150</td>
<td>90</td>
<td>-40</td>
<td>No</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>T2 (1)</td>
<td>105</td>
<td>100</td>
<td>-5</td>
<td>No</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>T3 (1)</td>
<td>135</td>
<td>125</td>
<td>-10</td>
<td>Yes</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>T4 (2)</td>
<td>115</td>
<td>80</td>
<td>-35</td>
<td>No</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>T5 (2)</td>
<td>135</td>
<td>75</td>
<td>-60</td>
<td>No</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>T6 (2)</td>
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<td>105</td>
<td>-25</td>
<td>No</td>
<td>3</td>
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<td>T7 (2)</td>
<td>145</td>
<td>75</td>
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<td>3</td>
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<tr>
<td>T8 (3)</td>
<td>150</td>
<td>115</td>
<td>-35</td>
<td>Yes</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>T9 (4)</td>
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<td>No</td>
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<tr>
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<td>97.8</td>
<td>-33.3</td>
<td>3/9 (33%)</td>
<td>3.22</td>
<td>1.77</td>
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References


