

RELATIONSHIP BETWEEN GRADE RETENTION AND PSYCHOLOGICAL OUTCOMES
DURING ADOLESCENCE

by

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(Under the Direction of Stacey M. Neuharth-Pritchett)

ABSTRACT

The aim of the current study was to examine the relationship between the experience of grade retention and self-report ratings of depression and competence during adolescence. Participants were enrolled in a public middle school in the southeastern United States. Three comparison groups were created: a pure retention group, a group of students on grade level but considered low-performing based on their fifth grade standardized test scores, and a group of typically achieving students on grade level. Students completed rating scales to self-report depressive symptomology and perceptions of the self related to competence and self-adequacy in various domains. Results suggest that grade retention is associated with higher ratings of depression and lower self-perceptions. Limitations and implications for future research are discussed.

INDEX WORDS: grade retention, depression, competence, adolescence

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CHAPTER 1

INTRODUCTION

Developmental processes in children and the outcomes associated with such processes across various domains have long interested researchers, policymakers, and educators. Conceptualization of these developmental constructs, including specification of the internal and external factors exerting influence on such constructs, is often difficult. The course of development is rooted in a collection of circumstances and experiences shaping behavior, including formative psychosocial events and maturational processes (Rutter, 1986). These formative experiences interact with contemporary ones ideally facilitating normative development.

Multiple factors contribute to development and undergird levels of a child's ecology (Sameroff & Fiese, 2000). Identification of these factors is necessary to understand a particular process or outcome of interest. Furthermore, development is characterized by subjective experience and objective behavior, both of which foster a functional relationship through which patterns of organization are both established and linked to the individual's environmental context (Bronfenbrenner, 1988). As the individual emerges from childhood into adolescence, a significant transition is taking place that initiates the reorganization and integration of multiple internal and external systems. Adolescence has long been considered a developmental period that involves difficulties such as conflict with parents, mood disruptions, and risk behavior, which are linked to changes in biology, role transitions, and greater social responsibilities

(Arnett, 1999). The current challenges that must be navigated through the course of adolescence are also being shaped by life events that preceded them and culminate in a particular outcome.

Goodyer (2001) describes a life event as “an environmental circumstance that has an identifiable onset and ending and may carry the potential for altering an individual’s present state of mental or physical well-being” (p. 204). Some life events can exert a positive impact after exposure, but for those that confer a negative result, especially in early developmental stages, the individual is placed at risk for adverse psychological consequences. One subtype, personal disappointments, includes deterioration in relationships, loss of a job, or failure in school that have the potential to play a crucial role in shaping the notions of the self. When a child experiences failure during the first few years of formal schooling, stakeholders in that child’s education must decide whether to use grade retention as a means for remediating areas of concern. Although grade retention is deemed an appropriate intervention to facilitate academic and social-emotional competence, children across grade levels in elementary school rate retention as being a highly stressful experience (Anderson, Jimerson, & Whipple, 2005; Yamamoto & Byrnes, 1987). These perceptions held by schoolchildren and the experience of being retained can potentially have lasting negative effects when the individual attempts to negotiate current and past environmental stressors through the transition phase of adolescence.

The practice of grade retention has been a focus of debate for decades. Many of its detractors claim that retaining a student offers minimal benefit to the child in the long run and might even be harmful. However, with the passage of educational reform legislation such as No Child Left Behind (NCLB, 2002), increased accountability for student performance, and limited resources, educators struggle to find interventions aimed at addressing student difficulties. The National Association of School Psychologists (NASP, 2011) has long advocated for the use of

evidence-based practices and effective interventions in promoting the educational attainment of students in America.

In the absence of empirically-supported prevention and interventions such as summer and after-school programs, use of instructional aides, school-based mental health programs, and early reading initiatives, grade retention remains one of the few options available for schools in remediating students' academic failure (Jimerson et al., 2006; Shepard & Smith, 1990). In 2007, approximately 10 percent of students in grades kindergarten through eight had been retained at some point during their school career (Planty et al., 2009). Researchers estimate approximately 447,000 first- through eighth-grade public school students were retained in 2008-2009 (Warren & Saliba, 2012). Based on these statistics and limited options for other interventions targeting academic failure, there is an expectation for grade retention to continue with costs estimated in the billions of dollars (Eide & Goldhaber, 2005). Moreover, retained pupils must "pay with a year of their lives" (Smith & Shepard, 1987, p. 130).

Although the body of research on grade retention documents resultant outcomes including achievement, behavioral adjustment, economic costs, and school dropout, there is a minimal body of literature documenting the psychological outcomes associated with the practice. The current study will address this gap by exploring the relationship between the experience of being retained and depression symptomology during adolescence. Furthermore, this study will examine the differences between retained and typically achieving students on measures of competence and self-adequacy. A developmental and organizational perspective (Cicchetti & Rogosch, 2002) along with the transactional model (Sameroff, 1975) will provide an interpretive framework for how early life events can exert an influence on the processes of adaptive or maladaptive functioning.

CHAPTER 2

LITERATURE REVIEW

Grade retention refers to a child repeating the same grade level during the following school year (Jimerson, Woehr, & Kaufman, 2007). The goal of this practice, also known as nonpromotion, failing, or flunking, is to remediate a child's academic, social-emotional, or behavioral problems through exposure to the same curriculum. Although the intent is to improve poor academic performance or remediate behavior, many researchers contend that retaining a child can have further deleterious effects on the child's educational achievement and social-emotional development (Burkam, LoGerfo, Ready, & Lee, 2007; Jimerson, 1999; Jimerson, Anderson, & Whipple, 2002; Jimerson, Carlson, Rotert, Egeland, & Sroufe, 1997; Meisels & Liaw, 1993; Pagani, Tremblay, Vitaro, Boulerice, & McDuff, 2001; Rumberger, 1995; M. L. Smith & Shepard, 1987).

Much of the empirical work conducted on grade retention offers little support for the practice in remediating academic, social-emotional, and behavioral difficulties. Yet, teachers continue to endorse the intervention as effective even when few report knowledge about retention practices or demonstrate awareness of the implicit values providing a basis for their judgment (Tomchin & Impara, 1992; Witmer, Hoffman, & Nottis, 2004). A teacher's decision to retain a student is usually based on beliefs an extra year of school in the same grade will ensure a greater mastery of subject matter and provide an opportunity for the child to mature, increasing the chance for academic success (Tanner & Combs, 1993). Still, "children who repeat kindergarten are not maintaining comparable grade-level performance; their academic standing

relative to children who did not repeat kindergarten is deteriorating” (Burkham et al., 2007, p. 128).

Smith and Shepard (1987) point to teachers’ use of their tacit knowledge when making retention decisions and how a student’s short-term gains confirm their beliefs. This error in teachers’ thinking might further support incorrect assumptions made by teachers as few teachers receive feedback on the status of students for whom they recommended retention. The knowledge teachers access when deciding to retain a student is largely based on first-hand experience with specific children under concrete circumstances, but the information might be incomplete and misleading (M. L. Smith, 1989). Teachers could notice an improvement in the retained student’s area of difficulty, but they do not track outcomes as students continue to move through subsequent grade levels. Therefore, potentially negative outcomes in the long-term are less apparent to these teachers. The implementation of a system for early identification of students who struggle, which uses evidence-based interventions with frequent progress monitoring, will help ensure students do not fall below grade level. A decision to use retention as an intervention should be accompanied with more than just a “repeat” of the current grade’s instruction (NASP, 2011).

Although teachers play an integral role in the judgment to retain a student, other key players in the decision-making process include administrators, school psychologists, and parents. However, differences exist in opinions about who should have the final say regarding the retention decision. Survey findings from an investigation on the attitudes of students, parents, and educators toward repeating a grade revealed the majority of principals (54%) perceived the retention decision should be left to them (Byrnes, 1989). These perceptions held by administrators might result in the school psychologist being overlooked as a key informant in a

collaborative process. Research has indicated school psychologists would like to have a greater role in nearly all areas of the retention decision-making practice (Schnurr, Kundert, & Nickerson, 2009).

The student's parents often bear the greatest responsibility for the decision of whether or not to retain their child even though parents initiate few retention interventions. Research suggests certain characteristics predict this outcome. Parental cognitive functioning, level of involvement in their child's education, and attitude toward the school have all been noted as important factors (Jimerson et al., 1997).

Factors Related to Grade Retention

Academic difficulties have been suggested as the most important factor predicting retention (Dauber, Alexander, & Entwisle, 1993). Teachers often note a lack of progress and in many cases consider retention as a primary intervention rather than identifying and remediating learning or behavioral concerns. Still, low academic achievement might not always serve as the core rationale for a student's nonpromotion to the next grade level. Researchers have also identified other characteristics, which might play an explicit or implicit role in the decision to retain.

The gender of a student is associated with increased probability of retention with boys more likely than girls to experience the intervention (Dauber et al., 1993; Gottfredson, Fink, & Graham, 1994). Perceptual problems associated with reading, inattention, a younger age, and lower preacademic achievement also significantly discriminate between retained and promoted students at the end of kindergarten (Mantzicopoulos, Morrison, Hinshaw, & Carte, 1989). Sometimes parents of a child who is "young" for his or her class or whose children are male will be given the advice to delay school entry to improve school readiness. The decision is not

wholly unsubstantiated given that children who begin school at an earlier age are more likely to repeat kindergarten (Burkam et al., 2007). Nevertheless, this practice of “academic redshirting” does not appear to offer a competitive advantage in achievement for those children and is not recommended as a viable solution to addressing concerns about learning or behavior (Cameron & Wilson, 1990).

Students who are chosen for retention vary based on race as well, although the existing literature reveals findings that are more inconsistent than those for gender and age. One study found no significant differences in the proportions of retention between non-Caucasian (i.e., Blacks, Hispanics, and Asians) and Caucasian children (Mantzicopoulos et al., 1989); whereas another reported racial differences in the association with repeating kindergarten even though the differences were not consistent across cohorts (Burkam et al., 2007). Several studies, however, indicate a Black student is more likely to be retained when compared to a Hispanic student (Byrd & Weitzman, 1994; Corman, 2003; Fine & Davis, 2003). Meisels and Liaw (1993) identified a noteworthy interaction effect between retention status and race. The interaction was associated with more negative performance for White students than Black and Hispanic students on grades, test scores, learning, emotional, and behavioral problems despite the fact Black and Hispanic students were retained in significantly higher proportions.

Research has revealed that, in some settings, students with learning disabilities (LD) are retained at much higher rates than students who are typically developing (McLeskey, Lancaster, & Grizzle, 1995). Many of the primary characteristics used in identifying students with LD are also the same as those reported when determining if students should be retained in grade level. Given most evidence demonstrates the ineffectiveness of retention as an intervention for any

student who is experiencing school failures, students with LD are the least likely to benefit from this intervention and likely should not be retained.

Beyond factors associated with classroom performance and personal endowments, social and familial predictors also correlate with school failure. A retained student is more likely to be from a low socioeconomic status home (Corman, 2003), live in a single-parent household (Burkam et al., 2007), and have a mother with low intelligence (Jimerson et al., 1997) and low level of education (Ferguson, Jimerson, & Dalton, 2001). These facets of the environment tend to have strong correlations with poverty and may result in harmful effects on physical well-being and development for the child (Evans, 2004). Potential health outcomes for children living in impoverished conditions, such as low birth weight and asthma, also have been found to be associated with an increased probability for early grade retention (Byrd & Weitzman, 1994). Further, researchers have found predictive relationships between speech defects, enuresis, and frequent ear infections with subsequent grade retention.

Measurement of contextual factors is not a typical focus for most research studies on the correlates and outcomes of retention. When these contextual factors have been investigated, results indicate rates of nonpromotion differ at various levels of the child's ecology. Burkam et al. (2007) found repeating kindergarten was most common in nonreligious private schools when compared to public and Catholic schools. This practice was also more common in preprimary schools that only include kindergarten, or kindergarten and a form of prekindergarten/child care. Results of a separate study indicated neighborhood characteristics have links with retention. Children in more affluent neighborhoods were significantly less likely to repeat a grade than those living in poorer neighborhoods (Corman, 2003). Furthermore, school districts with a larger size, higher revenues, and those with a larger student/teacher ratio were more likely to have

higher rates of retention (Bali, Anagnostopoulos, & Roberts, 2005). The latter observation between class size and its significant effect on retention led the researchers to suggest a reduction in class size as a potential alternative to this proposed educational intervention.

Empirical findings point to a variety of factors playing a role in the decision to retain a child; some of which are outside that child's constitution. These familial, neighborhood, school, and societal attributes in concert with each other and specific characteristics of the child increase the probability of retention. A single factor, or combination thereof, is best not thought of as having a causal linear relationship with the retention decision. A transaction exists between the child and the environment with both altering each other ultimately leading to particular developmental outcomes (Sameroff, 1975).

Consequences of the Grade Retention Experience

Outcomes of retained students have been given considerable attention in the research literature. The extant literature is replete with studies investigating the short-term consequences of retaining a child. An examination of the effects of repeating kindergarten on first grade achievement revealed that kindergarten repeaters had lower levels of literacy and mathematics achievement at the end of first grade when compared to children who only spent one year in kindergarten (Burkam et al., 2007). Results of a longitudinal analysis conducted by Jimerson et al. (1997) demonstrated similar short-term effects of retention. They found no significant gains in reading and spelling for the retained group when compared to a low-achieving promoted group. In some instances, students viewed as being at-risk for school failure are placed in transition classrooms. The differences in outcomes for transition students and an equally achieving but promoted group are negligible. Results suggest children placed in a first-grade Student Readiness Program (SRP) were not significantly different from a similar group who

were recommended for SRP placement but promoted across several academic and social-behavioral domains at the end of second-grade (Ferguson, 1991).

These short-term findings have provided a strong basis for the arguments against using retention as a remediation strategy. However, the dearth of studies examining long-term outcomes associated with early grade retention has been noted as a methodological concern (Jimerson, 2001b). Knowledge of the long-term ramifications of retention is equally important to consider when deciding to retain a student. A comparison of retained high school graduates to their low-achieving but promoted peers found that the odds of enrolling in a 4-year college for the retained group were half the odds of the promoted group (Fine & Davis, 2003). Results also indicated a student retained in the middle-school years had the lowest odds of attending a 4-year college than being retained in kindergarten through fifth. Jimerson (1999) found that in comparison to a group of low-achieving but promoted peers identified in elementary school, retained students had lower levels of academic adjustment at the end of 11th grade, were less likely to receive a diploma or General Education Diploma (GED) at age 20, received lower education/employment status ratings, were paid less per hour, and were more likely to drop out of high school.

Perhaps the most inimical consequence associated with grade retention is dropping out of school. In fact, Rumberger (1995) observed in his analysis of middle-school dropout that “the single most powerful predictor was whether a student was held back in an earlier grade” (p. 616). Estimates revealed that retained students were more than 11 times as likely to drop out of school than their promoted peers. Even after controlling for demographic and family background factors, retained students had 6 times the odds of dropping out. A longitudinal investigation on the outcomes of retained students through adolescence found that 19% of retained students

dropped out compared to only 2% of promoted students (Jimerson & Ferguson, 2007). These findings are significant but should not be considered deterministic. Retention has been identified as a robust predictor of school withdrawal but may be better conceptualized as a marker of presence on the pathway to dropping out. Experience with this educational intervention can influence a student's subsequent self-esteem, socioemotional adjustment, and school engagement, which are also associated with the decision to drop out (Jimerson, Anderson, et al., 2002).

Each day an estimated 7,000 students drop out of school, which totals to about 1.2 million students who will not graduate from high school each year (Alliance for Excellent Education [AEE], 2011). Evidence indicates that the consequences of dropping out affect both the individual and society at large. Dropouts encounter more difficulties in finding steady employment and securing an adequate income (Rumberger, 1987). These individuals are also at a disadvantage when attempting to obtain additional education and training in order to stay competitive in the job market. In 2009, the average annual income of a high school dropout was \$19,540, and a high school graduate earned \$27,380, a difference of nearly \$8,000 (Snyder & Dillow, 2011). Forgone income is also the most often cited social consequence of dropping out (Rumberger, 1987). The decrease in purchasing power, lower collection of tax receipts, and lower levels of worker productivity associated with dropouts can have a staggering impact on the economy. If the number of students who drop out each year were to graduate, the nation's economy could benefit from nearly \$154 billion in additional income over the course of their lifetimes; maintaining the current drop out trend would result in almost 12 million dropouts over 10 years with an estimated loss of \$1.5 trillion (AEE, 2011).

A limited number of studies have examined the social-emotional outcomes associated with retention. Results of a study on the relationship between retention status and social-emotional outcomes in eighth-grade found retained students had twice the odds of experiencing emotional problems than their never-retained counterparts (Meisels & Liaw, 1993). Later retention was also more problematic with regard to emotional problems for girls and students from lower socioeconomic homes. Similar harmful effects of grade retention have been observed on reports and rankings of self-esteem, self-worth, and overall emotional health in the years proximal (Ferguson, 1991; Jimerson et al., 1997) and distal (Hagborg, Masella, Palladino, & Shepardson, 1991; Jimerson et al., 1997) to the intervention.

Results from published meta-analyses of the extant research literature examining social-emotional outcomes associated with grade retention provide additional evidence of detrimental effects (Holmes & Matthews, 1984; Jimerson, 2001a). Meta-analysis is the statistical analysis of a collection of results from individual studies with the intent to integrate all the findings (Glass, 1976). The most important concept when conducting a meta-analysis is effect size (ES). Computation of effect size is the mean difference of an outcome variable between groups divided by the within group standard deviation. Results of the procedure allow researchers to take the difference between groups expressed in quantitative units and compare across studies. A negative effect size suggests that retention has a deleterious effect relative to a comparison group.

Holmes and Matthews (1984) concluded in their meta-analysis of 44 studies published between 1929 and 1981 that retained students display poorer social adjustment (-.27), emotional adjustment (-.37), and self-concept (-.19) in comparison to promoted students. Jimerson (2001a) demonstrated similar findings in his meta-analysis of 20 studies investigating grade retention

published between 1990 and 1999. Those results indicated a notable difference on emotional adjustment between retained students and a matched comparison group. The mean effect size of the retained group was .28 standard deviation units lower than the promoted group.

Additionally, 16 authors of the 20 studies comparing retained students with a matched control group determined grade retention is an ineffective intervention for social-emotional adjustment.

The effects of grade retention on behavioral functioning are similar to those found for academic and social-emotional outcomes. An examination of the differential effects of repeating kindergarten observed consistent problematic behavior in the retained children at the end of their second year of kindergarten and the end of first grade (Burkam et al., 2007). Furthermore, Jimerson et al. (1997) indicated a group of students retained in the early elementary years ranked highest on behavior problems after the completion of second-grade and continued to exhibit behavior problems through the end of sixth-grade.

Additional analysis provides evidence in support of the claim that retention does not remediate problem behaviors. In comparison to low-achieving, promoted peers, retained students have been found to display more aggression during adolescence (Jimerson & Ferguson, 2007). The adverse consequences associated with behavior highlight the ineffectiveness of retention as an intervention practice.

Some studies have reported results favoring advocates' view that grade retention is a beneficial practice. One study employing a propensity score estimation, which corrects for selection bias associated with all measured covariates, revealed several positive outcomes in different domains for retained students, especially in the short-term (Wu, West, & Hughes, 2010). Retention in the first grade was associated with decreased teacher-rated hyperactivity and peer-rated sad/withdrawn behaviors and increased teacher-rated behavioral engagement and peer

liking in the repeat year. However, as the retained students progressed through school, peer liking and perceived school belonging substantially decreased. The researchers noted a lack of data collection into the beginning of adolescence as a primary limitation. Therefore, trajectories of observed outcomes could not be determined as the retained students enter a new developmental stage.

A study examining the effects of retention on nonacademic outcomes for middle-school students revealed higher educational expectations, more positive peer associations, and more positive self-concepts after the repeated year (Gottfredson et al., 1994). Additionally, these retained students were significantly more attached to school and reported less rebellious behavior than their promoted peers. Yet, the authors suggest the positive effects might not continue long-term, are not generalizable, and are potentially attenuated by contextual factors.

Results of some studies have also suggested the use of retention as effective in remediating academic difficulty in the early elementary grades (Pierson & Connell, 1992). In one study, retained students experienced no statistically significant deficits in general self-worth or peer relatedness when compared to three nonretained comparison groups. They also demonstrated significantly better academic performance than other socially promoted students. Connell (1990) has argued that for retained students to remain engaged and achieve success, their social context must satisfy three basic psychological needs: competence, autonomy, and relatedness.

Teachers often indicate a lack of social-emotional maturity and presence of inappropriate behaviors as being salient factors in the decision to retain a student (Tanner & Combs, 1993; Tomchin & Impara, 1992; Witmer et al., 2004). Many educators agree retention is an effective strategy for giving immature students an opportunity to “catch up.” This raises an interesting

question of a moderator effect; that is, some children experience no significant differences when compared to low-achieving but promoted peers and others clearly have been shown to be negatively affected by the intervention. For those students who do exhibit progress in a specified domain, the evidence is attenuated with various caveats regarding methodology, generalizability, and contextual processes (Gottfredson et al., 1994; Pierson & Connell, 1992; Wu et al., 2010).

Investigations have attempted to identify these moderating variables that might influence student success subsequent to early school failure. “Successful” and “highly successful” educational outcomes of retained students were found to be associated with higher socioeconomic status, higher levels of maternal education, higher parental value of education, few kindergarten personal-social functioning deficits, higher early readiness scores, and younger age (Ferguson et al., 2001). Several of these same contextual characteristics have differentiated which retained students are more likely to drop out of school. Those who remained in high school had mothers with a higher reported level of education, higher value of education, better ratings of personal-social functioning, and a higher grade point average in junior high and high school (Jimerson, Ferguson, Whipple, Anderson, & Dalton, 2002).

Retention is just one probabilistic consequence due to the contributions of various factors external and internal to the child. The view of retention as a “one size fits all” intervention for improving a child’s academic, social-emotional, or behavioral problem does not necessarily address what is influencing the child’s individual or collective concerns. When educators focus on the type or degree of an innate quality, they might lose sight of contextual factors that may alter one another in a transactional manner. The number rather than the nature of risk factors will tend to determine outcome, and thus making universal interventions more difficult to implement (Sameroff & Fiese, 2000). For prospective retained students to

demonstrate improvements and achieve greater success, it is important to think about other prevention and intervention strategies that are supported by empirical evidence (Jimerson et al., 2006; Shepard & Smith, 1990) and attend to the concerns in a more adequate manner.

The Developmental Psychopathology Perspective

The course of development for an individual consists of multiple pathways resulting in potential outcomes categorized as being either normative or deviant. A developmental deviation is subsequently viewed as pathological and generally reflects repeated failures in adapting to prior developmental issues; for example, the processes of attachment, emotional regulation, and social integration (Sroufe, 1997). Maladaptive patterns in isolation do not constitute a psychopathological condition, but rather increase the risk for disturbance at later developmental stages. To understand different forms and manifestations of psychopathology, one must rely upon knowledge of normal development (Cicchetti & Schneider-Rosen, 1986). The focus of psychopathology is determining the degree of connection between normality and disorder with attention on how disorder parallels normal processes of adaptation and change, responses to stress and adversity, and discontinuities between the two conditions (Rutter, 1986).

Emergence of the developmental psychopathology perspective facilitated a shift away from the traditional medical model in which behavioral and emotional disturbance were regarded as being discrete and arising from singular, endogenous factors. Instead, psychopathology results from the complex interaction of multiple contextual factors in the environment, the individual's biological and behavioral systems, and personal experience. This developmental approach to psychopathology promoted an increase in the number of studies investigating psychological disorders in children and adolescence. By the early 1970s, depression was recognized as a distinct clinical entity in pubertal children (Parry-Jones, 2001).

Historical Aspects of Depression

Although the contemporary notion of depression existing in children and adolescents did not receive widespread recognition until the latter half of the twentieth century, the concept has roots in ancient Greece. The Greek physician Hippocrates first used the term melancholia to describe emotional disturbances associated with an imbalance of black bile in the human body. Eventually, the word became associated with disorders of emotions and by the nineteenth century, depression. In the intervening years, a variety of terms other than melancholia were used to define this condition: the vapours, hypochondriasis, spleen, and hip. Yet, melancholia was rarely acknowledged as a condition among juveniles prior to the nineteenth century and overall, little systematic attention was given to juvenile psychotics. The existence of insanity in early life was principally disputed or denied.

Historically, recognition and classification of childhood mental disorders centered on the extent to which children were regarded as miniature adults, the awareness of a psychological component in children's lives, and interest in the deterministic significance of early life experiences (Parry-Jones, 2001). Child psychiatry began to emerge as a recognizably independent discipline during the 1920s and 1930s, but there was still a denial of depression as existing in prepubescent children. The psychoanalytic perspective of Sigmund and Anna Freud exerted a substantial influence during the early twentieth century. As a result, the prevailing belief was young children could not produce a depressive state as evidenced in adults because of their lack of a superego. Depression was difficult to diagnose because of atypical, age-related features. Before there was a focus on developmental differences and age-specific features, no distinction was made between prepubertal, adolescent, and adult depression.

Definition and Epidemiology

According to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM-5; American Psychiatric Association, 2013), the symptoms of major depression include depressed or irritable mood, a markedly diminished interest or pleasure in activities, significant change in weight or appetite, sleeping problems, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness, excessive or inappropriate guilt, problems concentrating, indecisiveness, thoughts relating to death, and suicidal ideation or attempts. These symptoms are applied to children, adolescents, and adults. Furthermore, they must cause clinically significant distress or impairment in social, occupational, or other important areas of functioning to warrant a diagnosis.

Research on the point prevalence of depression reveals about 2% of school-aged children and about 8% of adolescents meet diagnostic criteria (National Alliance on Mental Illness [NAMI], 2009). Estimates for lifetime prevalence among adolescents are higher with a range of 12% to 20% having experienced depression (Merikangas et al., 2010). Moreover, reviews of epidemiological studies of depression suggest a number of comorbid disorders (Kessler, Avenevoli, & Merikangas, 2001). Anxiety disorders are the most common, with up to 75% of depressed youth also having a history of at least one anxiety disorder. Conduct disorder (Puig-Antich, 1982) and substance-use disorders also have a demonstrable association with depression around the transition to adolescence.

Although a substantial number of youth in community samples encounter periods of depression, the course is quite variable. Some individuals rarely, if ever, experience remission, while others experience long periods with few, if any, symptoms between discrete occurrences. Nevertheless, the consequences of depression can be pervasive and have the potential to

negatively impact several developmental domains, including school performance, peer interactions, parental relationships, and subjective well-being (Field, Diego, & Sanders, 2001). Identification of symptoms related to suicide is especially critical. According to the 2004 National Survey on Drug Use and Health (NSDUH; Substance Abuse and Mental Health Services Administration [SAMHSA], 2005), an estimated 9% of adolescents aged 12 to 17 experienced suicidal ideation during their most recent depressive episode. In addition, an estimated 3.6% reported having had a plan to commit suicide and 2.9% percent made an attempt.

Understanding the Development of Depression in Adolescence

Adolescence is a critical transition marked by substantial biological, social, and emotional changes. The traditional view of this developmental period has focused on inevitable “storm and stress” and the accompanying conflict with parents, mood disruptions, and risk behavior (Arnett, 1999). Puberty is often marked by a surge in behavior problems and clinical risks might emerge during this developmental period, which have the potential for continuing into adulthood (Mendle, Harden, Brooks-Gunn, & Graber, 2012). Even though the experience of puberty is common, the concomitant storm and stress is not ineluctable for every individual. Recognizing variations in the timing and tempo of adolescent biological changes and their interactions with psychosocial factors reduces the determinism of adolescent maladjustment and supports the view of adolescence as a multifaceted developmental process (Hollenstein & Loughheed, 2013). Moreover, a research focus on potential interactions between the biological, social, and emotional changes at puberty will improve an understanding of the onset, development, and maintenance of psychopathology during adolescence (Brooks-Gunn, Auth, Petersen, & Compas, 2001).

The historical belief that difficulties during adolescence, such as depression, represent a normal occurrence had a significant effect on past research and practice (Petersen et al., 1993). Difficulties encountered during adolescence were not considered abnormal and adolescents were not offered treatment because of a belief in the transient nature of the problems. Prior to 1978, a minimal amount of empirical research was conducted investigating adolescent depression (Reynolds, 1984). Nevertheless, there has been a dramatic increase in the number of studies focusing on this topic over the last few decades.

Extant literature reflects the use of three approaches into the assessment and classification of adolescent depression: depressed mood, depressive syndromes, and clinical depression (Petersen et al., 1993). The study of depressed mood emerged out of research in which depressive emotions are studied along with other features of adolescent development. According to the depressive syndrome approach, depression and other syndromes reflect the co-occurrence of deviant behaviors and emotions. The clinical approach is rooted in the disease model of psychopathology. Because of these approaches, we now have an improved understanding of the epidemiology (Kessler et al., 2001; Merikangas et al., 2010), biological mechanisms (Gillespie & Nemeroff, 2007; Gotlib, Joormann, Minor, & Hallmayer, 2008), psychosocial factors (Abela & Hankin, 2011; Allen et al., 2006; Aseltine, Gore, & Colten, 1994; McGrath & Repetti, 2002; Mendle et al., 2012), and cognitive processes (Cole, 1991; Nolen-Hoeksema, 1991) associated with depression.

The Biology of Depression

For those interested in factors contributing to developmental outcomes, the debate has centered on whether the biological constitution of an individual or the surrounding social and cultural context is dominant. Current conceptualizations of developmental models identify the

importance of the context in which development takes place, biologically-based attributes, and the process through which development occurs (Bronfenbrenner, 1988). Research on the roles of biological and physiological processes implicated in depression suggest either a response to environmental events or a genetic vulnerability to experience the disorder (Brooks-Gunn et al., 2001). Additionally, the influence of individual differences must be underscored when considering the occurrence of biological dysregulation at the onset of a depressive episode.

Interest in the genetic underpinnings of depression began when researchers observed a connection between a family history of depression and development of the disorder. To further investigate the role of genes in depression, Gotlib and colleagues (2008) conducted genotyping on saliva samples from a group of 67 girls aged 9 to 14 with no history of psychiatric disorders. The girls were categorized as being either a low-risk control (CTL) or high-risk (RSK) based on their mother's psychiatric history, especially with regard to depression. Results from administration of depression rating scales to both daughters and mothers revealed significantly higher scores for the RSK group than the CTL group. Furthermore, daughters who were homozygous for the *s* allele of a polymorphism (5-HTTLPR) in the serotonin transporter (5-HTT) gene evidenced a noticeable increase in cortisol production during and following exposure to a stressor. Daughters who possessed at least one copy of the *l* allele exhibited a modest decrease in cortisol levels over the course of stress exposure.

These findings provide an additional explanation for the association between genotype, exposure to stress, and the probability of depression (Gotlib et al., 2008). Presence of the *s* allele is understood as a marker for biological stress reactivity. This genetic variation results in dysregulation of the serotonin transmitter system, which then alters functioning of the hypothalamic-pituitary-adrenocortical (HPA) axis. When someone with the homozygous allele

experience stressful life events, the HPA axis is responsible for hypersecretion of cortisol. Individual predisposition to excess reactivity of the stress-response system is believed to play a role in the initiation and potential relapse of depression. Results of studies investigating the relationship between biological systems, stress, and emotional disturbance underscore the influence of multiple factors in development of depression.

The biology of depression also includes the biology of exposure to chronic stress during early developmental periods. Child abuse, neglect, or the loss of a parent during childhood are all forms of early-life stress with the potential to influence susceptibility to depression. Research on the psychobiology of early-life stress has observed relationships between the presence, developmental timing, and perception of trauma and altered functioning of the HPA axis and the autonomic nervous system response to stress (Gillespie & Nemeroff, 2007). Some individuals have a higher genetic loading for the first occurrence of depression during adolescence and are prone to impaired cognitive functioning due to abnormal levels of endocrine system hormones in response to stress (Brooks-Gunn et al., 2001). Given these findings, adolescents with an inherited vulnerability to depression are at an increased risk for maladaptive physiological and psychological outcomes with the potential for a more severe course.

Psychosocial Contributions to Depression

According to the transactional model, development is the product of a continuous dynamic interaction between the child and his or her social context (Sameroff & Fiese, 2000). An examination of environmental effects is necessary to comprehensively understand developmental outcomes as a series of reciprocal events mediating ongoing relationships. The environment does not provide experiences independent of the child but instead, affords the constraints and opportunities upon which the processes of development occur. Furthermore, the

individual is actively involved in the selection, modification, and creation of developmental contexts (Bolger, Caspi, Downey, & Moorehouse, 1988).

Relationships with family and peers are an immediate and integral component in the environment of the developing person, especially adolescents. In light of research evidence revealing 50% of sampled adolescents with depression had their onset by age 13 (Merikangas et al., 2010) and an increase in the rates of depressive symptoms beginning in the preteens (9-12 years) through late teens (17-20 years) (Schraedley, Gotlib, & Hayward, 1999), the social developmental context of adolescence should be reasonably expected to have an important impact on psychological health. Indeed, the amount and type of social support in an adolescent's immediate environment are vital to understanding the causes of a disorder in addition to those that exacerbate or maintain a condition.

Results from a multi-wave prospective study of the relationship between stress processes and depressive symptoms in high school students revealed those identified as asymptomatic experienced the lowest mean levels of stress and the highest levels of social support whereas those identified as chronic reported the highest levels of stress and lowest levels of support (Aseltine et al., 1994). Additionally, relationship problems and lack of family support were strongly linked to decreased functioning in the asymptomatic group but only weakly related to the maintenance of depression among chronically depressed youth. Adolescents who were chronically depressed appeared highly reactive to supportive friendship ties, which was not observed among those in the previously asymptomatic group. The observed shift from family to friendships among the more troubled group suggests an adaptive response to the social context. These findings highlight the importance of how differentiations in environmental factors affect the onset and maintenance of depression in adolescence.

Researchers have observed similar predictive relationships between adolescent reported depressive symptoms and problems with interpersonal functioning (Allen et al., 2006; Capaldi & Stoolmiller, 1999; Mendle et al., 2012). Specifically, Allen and colleagues (2006) found future increases in depressive symptoms were predicted by difficulties establishing autonomy and relatedness in interactions with mother and behavior undermining relatedness with close friends, calls for emotional support from close friends, and social withdrawal. Further analyses confirmed adolescents' parental and peer relationship behaviors contributed an additional 15 percent of explained variance to understanding future relative increases in adolescent depression. From a developmental psychopathology perspective, areas of greatest vulnerability in interpersonal relationships occur when they potentially interfere with salient developmental tasks (Cicchetti & Toth, 1998). A failure to develop good peer relations could predispose to depression because a means to cope with distress is absent and a tendency exists to make disparaging social comparisons (Cicchetti & Schneider-Rosen, 1986).

A longitudinal study investigating mothers' and fathers' use of harsh verbal discipline found a significant increase in adolescents' self-reported depression symptoms when exposed to higher levels of this disciplinary strategy (Wang & Kenny, 2014). However, the researchers reported that adolescents' depressive symptoms at age 13 did not predict parental use of harsh verbal discipline at a one-year follow-up. Additional analysis was conducted to determine a potential moderating effect of maternal and paternal warmth (i.e., responsive and affectionate care-giving) on the link between harsh verbal discipline and adolescent depressive symptoms over time. Results indicated that despite the presence of a warm and loving parent-child relationship, the effects of cursing, yelling, or insults continued to exert substantial negative

psychological effects. Indeed, the presence of depression in adolescents might weaken the emotional bond between the parent and child instead of eliciting further harsh verbal discipline.

The Role of Cognitive Processes in Adolescent Depression

As a psychological disorder, depression has developed from being largely ignored within juvenile populations to being recognized as a multifaceted construct that emerges at different developmental stages due to the interactions of various internal and external factors. One additional influence on the formation and maintenance of depression is cognitive processes. Changes in cognitive sophistication take place over time and play an important role in how appraisals of the self in relation to ongoing activity develop during transition (Connell, 1990). The adolescent is concerned with how environmental circumstances are meeting the basic psychological needs for competence, autonomy, and relatedness. Even prior to the challenges of adolescence, the establishing of internal working models related to the early parent-child relationship and the extent to which competency, independence, and secure connections are met results in distinct types of depression (Blatt & Zuroff, 1992). Manifestations of these types and the occurrence of depression are a product of individual early experiences, personality characteristics, and evaluating particular types of stress (McCauley, Pavlidis, & Kendall, 2001; Mezulis, Hyde, & Abramson, 2006). Ultimately, the level of a child or adolescents' cognitive development is going to be relevant when a clinician or mental health service provider makes a decision on the most appropriate therapeutic intervention (Cicchetti & Schneider-Rosen, 1986).

Within a developmental context, a competency-based model supports the presence of depression in childhood (Cole, 1991). The model emphasizes the role of social comparison processes, self-fulfilling effects of evaluations from others, and how the internalization of others' appraisals shapes the self-image. Cole (1991) examined the model by collecting self-report

depression ratings and peer nominations of competence using a large sample of elementary school children in the third and fourth grades. He hypothesized that depression outcomes would be related to competency feedback across a wide variety of domains, negative feedback in multiple domains of competency will be cumulatively related to depression ratings, and possessing competence in one or more areas counterbalances other areas of incompetence. Results confirmed each hypothesis and offered further support for the view that competence is internalized through an interactive process, which in turn limits the formation of positive self-beliefs.

Similar findings were reported in a study that investigated the association between levels of academic competence (i.e., score on a math achievement) and peer ratings of social competence and peer-nominated depression, self-rated depression, and self-perceived competence (Blechman, McEnroe, Carella, & Audette, 1986). An analysis of the data revealed significantly lower peer-nominated and self-rated depression scores for the competent group, which fell above the median on measures of academic competence and social competence. Furthermore, no children in the competent group scored at or above 19 on the modified version of the Children's Depression Inventory. Although this score was used as a conservative cutoff, it has been suggested as an acceptable estimator for clinical level of depression (Kovacs, 1992). Of note, the sample size was smaller when compared to the Cole (1991) study but 21% of students were in the fifth grade and 25% were in the sixth grade. Some of the students in sixth grade who were included in the less competent group might be experiencing the early stages of puberty and the potential stress concomitant with the onset of adolescence.

To understand the direction of causality, Blechman and her colleagues (1986) suggested the use of a longitudinal study. In a nonclinical sample of children who were followed from

fourth grade through sixth grade, self-reported depressive symptoms predicted a change in children's negative self-perceptions and also predicted children's greater underestimation of their academic competence and social acceptance (McGrath & Repetti, 2002). Moreover, neither negative self-perceptions nor negative cognitive distortions in the academic and social domains were associated with subsequent increases in depressive symptoms over time. Despite these findings being contrary to conclusions that support cognitive style as a risk factor for depression (McCauley et al., 2001; Robinson, Garber, & Hilsman, 1995), the stability of even mild depressive symptoms may offer the impetus by which preadolescents create unrealistic, negative views of the self and undervalue their competence.

A description of competence from a developmental perspective takes into consideration the effectiveness with which an individual draws upon personal and environmental resources to successfully navigate salient developmental issues (Waters & Sroufe, 1983). The period of adolescence is a significant transition for any individual and necessitates the generation and coordination of flexible, adaptive responses to environmental demands. Evidence has demonstrated that a lack of competency is related to ratings of depression in middle childhood, and the experience of depression can potentially lead to a reduction in perceived competency as late as sixth grade. The lower perception of academic competence in particular has been observed to exert a mediating effect in the relationship between self-reported symptoms of depression in seventh grade and dropping out in later adolescence (Quiroga, Janosz, Bisset, & Morin, 2013). Results also revealed that adolescents with higher symptoms of depression were 23% more likely to dropout of school.

One possible explanation for the link between depression symptoms and school dropout emphasizes the way students doubt their ability to succeed in school and concurrently, ruminate

on their negative experiences (Quiroga et al., 2013). According to the response styles theory, a ruminative response to depression is defined as thoughts and behaviors that focus one's attention on one's depressive symptoms and the meaning of those symptoms (Nolen-Hoeksema, 1991). Those individuals who engage in ruminative responses are likely to experience increased severity and duration of depressive symptoms due to excessive but passive worry about depression that diminishes the ability to adequately solve complex problems (e.g., interpersonal) and makes negative thoughts more accessible (Nolen-Hoeksema, 1994). The depressed adolescent might become isolated and think about the symptoms, worry about the implications of depression, or worry about consequences of the distress. Further consideration of the ruminative response style has led some researchers to hypothesize rumination as impairment in the ability to disengage attention (Koster, De Lissnyder, Derakshan, & De Raedt, 2011). The presence of certain internal or external stressors cue ruminative thoughts by conflicting with personal goals. For individuals with a negative self-view, any accompanying self-relevant negative information depletes attentional control and prevents a reappraisal of the situation for effective problem-solving.

A longitudinal research design on the link between rumination and depressive symptoms during adolescence found that higher levels of rumination were associated with a past history of major depressive episodes, a greater likelihood of experiencing the onset of a major depressive episode during the follow-up period, and greater duration of future clinician-rated depressive symptoms (Abela & Hankin, 2011). Moreover, adolescents who reported high levels of rumination and experienced elevations in negative events over the past three months had higher self-reported and clinician-rated levels of depressive symptoms and were more likely to experience the onset of a major depression episode. The cognitive style that an adolescent uses when coping with negative emotions and stressful life events can determine the extent to which

depressive symptoms are present. Indeed, low self-esteem and a negative attributional style at a significant educational transition during adolescence tends to result in higher levels of depressive symptoms (Robinson et al., 1995). Depression and self-esteem have a strong mutually reciprocal influence on each other, especially for boys during the adolescent period (Rosenberg, Schooler, & Schoenbach, 1989).

An early established relationship between limited academic and social competence and depression sets the stage for maladaptive cognitive styles (e.g., low self-esteem, negative attributional style, persistent rumination) that restrict the individual's ability to competently address future developmental challenges. Adolescence is a critical period in the life of any individual that requires the reorganization of biological, behavioral, cognitive, and social systems. The process of going through these multiple changes can be highly stressful and necessitates an adaptive response. For those adolescents who have previously experienced low competence and depression, they will likely continue to display incompetence to new emerging demands with subsequent episodes of depression and other negative outcomes. However, the ever expanding and changing social environment can provide opportunities for the adolescent to integrate self-system processes associated with competence, autonomy, and relatedness (Connell, 1990). The transactional model of development views the individual as active in the pathological process and an inability to resolve a salient developmental task at one point does not preclude successful resolution of subsequent tasks (Cicchetti & Schneider-Rosen, 1986).

Prevention and Treatment of Depression in Adolescence

To address the diverse processes that contribute to varied symptom expression and consequences of depression, psychopathology has been described as an outcome of development that requires an understanding of the ways individual biological, psychological, and social

systems are structured and integrated over time (Cicchetti & Toth, 1998; Sroufe, 1997). Pathology is not merely the expression of endogenous traits that exert their influence on patterns of adaptive functioning. The problematic behavioral or emotional disturbance takes shape over time as the individual interacts with environmental circumstances and previous attempts to adapt. Indeed, efforts to ameliorate the occurrence of psychopathology will result in greater success if the contextual constraints and opportunities, personal characteristics in the context, and processes of development are taken into account (Bolger et al., 1988; Bronfenbrenner, 1988). A developmental perspective on psychopathology offers the framework to assist in the development and provision of prevention and intervention efforts for adolescents experiencing or at risk for depression (Cicchetti & Rogosch, 2002).

Even though depression has been recognized as a legitimate disorder during adolescence for a relatively short time, several prevention and treatment approaches are available (Hauenstein, 2003). Medication (e.g., tricyclic antidepressants, selective serotonin reuptake inhibitors) and psychotherapy (e.g., cognitive behavior therapy, interpersonal therapy, family therapy) are widely accepted options; however, research on effectiveness is more extensive for the latter. Systematic reviews and meta-analyses indicate that medication or psychotherapy are beneficial when utilized individually but a combination of the two is most effective in reducing depressive symptoms (Lewandowski et al., 2013). Psychoeducation offers professionals the opportunity to instruct adolescents and parents about the relationship between healthy behaviors and improvement of depressive symptoms. Social skills training as part of a psychoeducation program can assist in the establishment and maintenance of high quality peer interactions. Furthermore, parents are an integral component to the adolescent's social support network,

which necessitates an understanding of the risk and protective factors related to the experience and expression of depression.

Before the implementation of a prevention or treatment approach, the provider should be aware of several issues that can diminish or strengthen the goal of improved functioning.

Adolescence spans a number of years and multiple developmental differences can be present between individuals. Prevention or treatment efforts that are developmentally sensitive and take into account developmental level as a moderator or mediator of outcomes will likely be more effective (Holmbeck, Devine, & Bruno, 2010). The cognitive-developmental level of an adolescent might limit or enhance his or her ability to understand the purpose of therapy and the extent to which cognitive-behavioral strategies (e.g., perspective-taking, role-playing) are implemented. The selected program should have an appropriate target and be open to modification due to additional individual characteristics that might differentially effect results; for example, gender, ethnicity, and cultural factors are suggested moderators (Horowitz & Garber, 2006). Certainly, the effectiveness of prevention and treatment programs for ethnic minority youth has been a subject of debate in addition to whether ethnicity does moderate outcomes and the success of culturally-responsive adaptations (Huey & Polo, 2010).

A final domain that is important to prevention and treatment outcomes but receives minimal attention within the youth psychotherapy literature is identification of active therapeutic processes (Shirk & Karver, 2006). Process-outcome studies can aid in the specification of which techniques, procedures, and transactions are going to be most beneficial. Research has demonstrated that the level of therapist adherence, the degree of flexibility in the therapeutic relationship, and promotion of alliance and involvement determine positive changes in treatment outcomes. Moreover, a sophisticated approach to measuring processes can offer a more

thorough picture of the effect for a given program and the extent to which the hypothesized mediator plays a role (Horowitz & Garber, 2006). A concerted effort to identify mediators, such as coping skills, stress management, and interpersonal problem-solving, that impact the relationship between intervention and outcome promotes the development of more effective, efficient, and enduring results.

The manner in which depression develops and manifests is quite variable due to the diversity of developmental pathways. The notion that different pathways may lead to similar expressions of psychopathology (i.e., equifinality) and yet, similar initial pathways may result in different forms of dysfunction (i.e., multifinality) (Cicchetti & Rogosch, 1996) must be considered when deciding on how to prevent or treat psychopathology. Multiple levels of the child's ecology influence any number of mechanisms or processes instrumental to the formation of pathways leading to disorder. The school is one social-ecological system that can conceivably foster either adaptive or maladaptive response patterns in behavioral, cognitive, social, and emotional domains. According to Rutter (1980), "Schooling *does* matter and *does* have important effects on children's behavior and scholastic development" (p. 212). Studies that combine educational and mental health issues would further an understanding of how the social context of school shapes outcomes over development and inform the design of individual and contextual interventions (Roeser, Eccles, & Strobel, 1998).

An analysis of the relationship between students' perceptions of school belonging and various psychological outcomes found individual student-level reports of belonging to negatively predict depression outcomes (Anderman, 2002). Furthermore, the findings for depression were moderated by an aggregated measure of school belonging. For schools where many students report a high sense of belonging, the negative effect of individual belonging and its association

with depression is essentially canceled out. This result suggests that psychological outcomes during adolescence, such as depression, are related to contextual variables of the school that can be altered to meet the developmental needs of adolescents. The concept of belonging, or the sense of relatedness and need to feel a caring, secure connection with the social surroundings, is a basic psychological need inherent to humans (Connell, 1990; Ryan & Deci, 2000). Because this innate psychological construct has a strong environmental effect, it is more malleable to change and an appropriate target for interventions (A. R. Smith et al., 2012).

Schools hold a considerable amount of potential for enacting prevention and interventions programs to address the mental health needs of adolescents. A study evaluating the effectiveness of a universal school-based program to prevent depression in adolescents revealed a significant reduction in self-reported symptoms of depression and hopelessness from pre- to post-intervention and maintenance of these changes at a 10-month follow-up when compared to a control group that simply completed the measures (Shochet et al., 2001). The Resourceful Adolescent Program – Adolescent (RAP-A) and Resourceful Adolescent Program – Family (RAP-F) incorporated elements of cognitive-behavioral therapy (CBT) and interpersonal components (e.g., perspective taking, skills to broaden social support). The RAP-F group included adolescents and their parents wherein the latter also received information on normal adolescent development and strategies for promoting adolescent self-esteem and independence. Overall, adolescents reported high satisfaction with the RAP programs, and from a health-promotion perspective, the subclinical adolescents in the RAP groups were more likely to fall in the healthy range and less likely to fall in the clinical range at post-intervention and follow-up in comparison to the control group.

Inclusion of parents in this study supports the need for a social ecological model to target adolescent depression in addition to offering a continuum of support in the form of universal programming. Although schools are used as the site for intervention and ostensibly the target, efforts need to extend beyond the school and account for broader sociocultural systems (e.g., neighborhood, public policies, media, culture, social ideologies) that influence adolescent development (Herman, Merrell, Reinke, & Tucker, 2004). School psychologists can assume a primary role in the process through advocacy of prevention methods, facilitating access to community agencies that provide mental health services, demonstrating culturally sensitive practice, and remaining mindful of social structures that contribute to rising rates of adverse psychological outcomes. Moreover, the school psychologist is in a unique position to further the positive development of students and assume an active role in the assessment, diagnosis, and treatment of depression (Reynolds, 1984).

Need for the Current Study

Evidence from the existing literature has led many within the general public to advance the idea that society is facing an “epidemic” of adolescent depression (Costello, Erkanli, & Angold, 2006). The concern is not entirely unfounded given the increased trend of prescribing antidepressants to adolescents, higher rates of teen suicides, increasing levels of depression and anxiety over time, and increasing lifetime rates of depression in later-born cohorts. Although the results of a meta-analysis were contrary to the public’s perception that depression rates for adolescents have increased over a 30 year period (Costello et al., 2006), the concern is not without merit and warrants attention. The contemporary focus on and acknowledgment of depression in young people seemingly reflects greater sensitivity to a long-standing problem as opposed to the presence of an epidemic.

The rates of grade retention in the United States may not be considered an epidemic but for many scholars, policymakers, and educators, the decision to hold a student back for an academic, social-emotional or behavioral reason is contraindicated. Grade retention is a significant, undesirable life event for many students who must experience it. Such a circumstance carries the potential for altering an individual's mental well-being and increasing the liability for mental and behavioral disorders (Goodyer, 2001). Research on the short- and long-term effects of grade retention suggests that the practice has limited benefits for remediating academic and behavioral concerns. Similarly, the emotional outcomes for students who are retained tend to be troublesome and point to the risk for depression as formations of competence and self-adequacy are challenged. Presently, there is minimal overlap in the research literature between grade retention and depression outcomes, especially during the adolescent years. Moreover, an examination of adolescent self-perceptions across various domains integral to personal development will add to the understanding of how early experience relates to adverse psychological states. The current study aims to address the need for a more thorough understanding of how the experience of grade retention as an early life event impacts adolescent depression, competence, and self-adequacy.

CHAPTER 3

METHOD

Participants

Participants in this study were 249 adolescents enrolled in a public middle school in the southeastern United States. Students were in either sixth ($n = 93$), seventh ($n = 72$), or eighth ($n = 84$) grade at the beginning of the study. Accordingly, data were collected across three years from a subset of participating students. Once students exited the middle school, data collection was not possible in high school. Participants completed assessments each spring during their middle-school years when they were released from class and completed a battery of self-report rating forms while monitored by adults who could provide assistance if needed. Information on demographic variables was obtained from permanent records on file in the school office.

Of the participants, 113 (45.4%) were male and 136 (54.6%) were female. Ninety-four students (37.8%) qualified for free- or reduced-price lunch. The racial composition of the participants was 77.9% ($n = 194$) White, 16.1% ($n = 40$) African American, and 6.0% ($n = 15$) Other. Participants whose racial identity was coded Other included students who were Hispanic, Asian, or Multi-racial. Thirty students (12%) received services through a special education program of which most were identified with learning disabilities. From the overall sample, 48 (19.3%) students had been retained early in their elementary school careers. Chi-square analyses were conducted to examine differences on demographic variables. No statistically significant differences were found by grade level for gender, enrollment in free- or reduced-price lunch, race, special education status, and grade retention.

Additional analyses were conducted to more thoroughly understand the demographic variables of students based on their retention status. A statistically significant difference was found between retention status and free- or reduced-price lunch ($X^2(1) = 10.72, p = .001$) where students in the retained group were more likely to receive free- or reduced-price lunch. A statistically significant difference ($X^2(2) = 10.23, p = .006$) was also found between retention status and race where more African American students were retained in comparison to members of other racial groups. A final statistically significant difference was observed between retention status and special education. Specifically, 22.9% of the retained sample was also identified as receiving special education service ($X^2(1) = 6.63, p = .01$). No statistically significant difference was found between retention status and gender.

Standardized test scores from fifth grade were used to examine the overall academic profile of retained and promoted students. At the end of fifth grade, statistically significant differences were found on the normal curve equivalent scores from the Iowa Test of Basic Skills (ITBS) for both reading and mathematics. The mean score in reading for students who were retained was 37.38 ($SD = 14.32$) and 54.26 ($SD = 16.95$) for students who were on grade level [$F(1, 247) = 40.70, p < .001$]. For mathematics, the mean score for students who were retained was 42.02 ($SD = 13.94$) and 58.56 ($SD = 17.05$) for those students who were on grade level [$F(1, 247) = 38.89, p < .001$].

Based on previous studies that examine retention practices (Jimerson et al., 1997; Jimerson & Ferguson, 2007; Pierson & Connell, 1992), a parallel strategy of grouping participants for subsequent comparisons was employed. This grouping strategy included classifying students into a pure retention group, a group of students on grade level but considered low-performing based on their fifth grade standardized test scores, and a group of typically

achieving students on grade level. Examination of normal curve equivalent scores indicated that a group of students existed who had not been formally retained; however, their profiles on the ITBS closely resembled students who had been retained rather than students who were typically developing and on grade level. Therefore, a group of students who were low-performing but promoted was formed using the lowest two quartiles from the students' reading scores on the fifth grade ITBS. This low-performing, but on grade level group, consisted of 102 students. One-way analyses of variance were conducted on the ITBS data to examine differences between students who were retained and students who were members of this low-performing but on grade level group. The mean reading score was 37.38 ($SD = 14.32$) for students who were retained and 41.27 ($SD = 11.88$) for students in the low-performing group [$F(1, 148) = 3.07, p = .08$]. For mathematics, the mean score for the retained group was 42.02 ($SD = 13.94$) and 49.49 ($SD = 14.55$) for the low-performing comparison group, with an overall statistically significant difference [$F(1, 148) = 8.83, p < .003$].

In examining differences among the three groups of students (retained, low-performing control, and control) on the ITBS, further evidence supports the selection of a sample of students classified as low-performing controls. On the reading measure, a main effect was found among the three groups [$F(2, 246) = 176.07, p < .001$]. The mean scores on reading for the retained, low-performing control, and control were 37.38 ($SD = 14.32$), 41.27 ($SD = 11.88$), and 67.65 ($SD = 9.17$), respectively. Post-hoc Scheffé tests revealed statistically significant differences between the retained group and control and the low-performing control and control groups. The same profile was found for the mathematics scores with a main effect among all three groups [$F(2, 246) = 67.58, p < .001$]. Mean mathematics normal curve equivalent scores were 42.02 ($SD = 13.94$), 49.49 ($SD = 14.55$), and 67.90 ($SD = 14.20$), respectively. Post-hoc Scheffé tests

revealed differences between the retained and the other two groups, as well as a difference between low-performing control and control.

Chi-square analyses were conducted to explore differences among the demographic variables for all three groups. A statistically significant difference was found for enrollment in the free- or reduced-price lunch program, where 58.3% of students who were retained and 39.2% of low-performing control received free- or reduced-price lunch versus only 26.3% of the control sample ($X^2(2) = 14.31, p = .001$). Statistically significant differences also were observed for race. African American students were more likely to be represented in the retained and low-performing control groups while a low percentage of White students were retained ($X^2(4) = 16.12, p = .003$). A statistically significant difference was also found with regard to special education. Students in special education were more likely to be placed in the retained and low-performing control groups ($X^2(2) = 14.22, p = .001$). No differences were found among the three groups for gender.

These preliminary findings demonstrate that significant academic differences exist among the three groups. What remains to be determined, however, is whether such differences might hold for psychological constructs such as the students' emotional development and perceptions of the self.

Research Questions

To explore the impact of grade retention on psychological outcomes during the adolescent period, two research questions were examined in this study. Previous research studies indicate that the experience of being retained confers little to no benefit on academic achievement or behavioral adjustment. A few scholars and educators have investigated the relationship between grade retention and social-emotional outcomes but no research has focused

on depression and self-perceptions of competence during adolescence. Thus, the research questions examined in this study were: (1) Do previously retained students differ from their academically promoted peers on ratings of symptoms associated with depression? (2) Do previously retained students rate themselves differently across various domains of competence and self-adequacy in comparison to students who remained on grade level?

Measures

Participants in this study reported depressive symptomology with the 27-item Children's Depression Inventory (CDI; Kovacs, 1992). The CDI was introduced to the overall battery of assessments after the first year of data collection; therefore, scores for the CDI are only available for the second and third years. The CDI is an easily administered and scored rating scale suitable for children and adolescents aged 7 to 17 years. All items on the CDI consist of three choices, keyed 0 (absence of symptom), 1 (mild symptom), or 2 (definite symptom), with higher scores indicating increasing severity. An individual setting is the preferred method of delivery but group administration is also acceptable.

Scores on the CDI quantify a range of symptoms associated with depression, including disturbed mood, hedonic capacity, vegetative functions, self-evaluations, and interpersonal behaviors. Each of the symptoms is aligned with the Negative Mood ($\alpha = .62$), Anhedonia ($\alpha = .66$), Ineffectiveness ($\alpha = .63$), Negative Self-Esteem ($\alpha = .68$), and Interpersonal Problems ($\alpha = .59$) scales, respectively. Cronbach's alpha for the entire measure in the normative sample was found to equal .86. Calculation of a CDI total score is also possible. Overall, the CDI appears to have an acceptable level of stability and strong validity in the characterization of depressive symptoms in children and adolescents.

Perceptions of the self were assessed with the Self-Perception Profile for Children (SPPC; Harter, 1985). Participants completed this particular measure during each year of the data collection. The SPPC contains 36 items that are intended to measure aspects of competence and self-adequacy with the overall goal assessing differences in children's perceptions of themselves across various domains. This self-report rating form is appropriate for youth aged 8 to 14 years and it may be administered in groups as well as individually. Each of the six scales contains six items that are scored 4, 3, 2, or 1, where 4 represents the most adequate self-judgment and 1 represents the least. The questions for each item are structured to eliminate the tendency of respondents to provide social desirable responses and offer accurate self-perceptions instead.

The six scales on the SPPC include Scholastic Competence, Social Acceptance, Athletic Competence, Physical Appearance, Behavioral Conduct, and Global Self-Worth. Four separate samples were selected to establish the instrument's internal consistency reliability. Children in Sample A were in the sixth and seventh grade. Sample B consisted of students in sixth, seventh, and eighth grade. Those in Sample C were in grades three through six, and Sample D included third, fourth, and fifth grade students. Alpha levels were acceptable across samples for all six scales, with a range of .71 (Sample D Behavioral Conduct) to .86 (Sample B Athletic Competence).

Data Analysis

Based on findings in the existing literature for grade retention and results from the current study's chi-square analyses, a multivariate analysis of covariance (MANCOVA) was selected to test the effects of group membership on the dependent measures after controlling for select demographic variables. The MANCOVA procedure was conducted for each self-report ratings

form on each year of available data. Following the MANCOVA procedures, repeated measures analysis of variance (ANOVA) were performed in order to determine the extent to which membership within a specific group influenced depression and self-perception scores over time. Finally, univariate one-way ANOVA were run to address the research questions in the current study on each individual year.

CHAPTER 4

RESULTS

Given the statistically significant differences revealed from the chi-square analyses for demographic variables, a MANCOVA was conducted to test for effects of group membership (i.e., retained, low-performing control, and control) on scale scores from the Children's Depression Inventory (CDI). Results from Year 2 (data from seventh and eighth graders) indicated after controlling for enrollment in free- or reduced-price lunch, race, and placement in special education, the overall effects of group membership were still significant for scores from the Negative Mood, Interpersonal Problems, Ineffectiveness, Anhedonia, and Negative Self-Esteem scales ($\lambda = .85$, $F(10, 348) = 3.01$, $p = .001$, $\eta^2_p = .08$). The same significant overall effects were found for Year 3 data (eighth grade only) after controlling for the same covariates ($\lambda = .75$, $F(10, 128) = 2$, $p < .05$, $\eta^2_p = .14$).

To test for the potential influence of time and interactions with group membership, a repeated measures ANOVA was conducted for each scale of the CDI. The tests found a nonsignificant effect of time on changes in the scores for each of the five scales. Additionally, the interaction between time and the independent variable was not significant across scales. These results indicate stability of the construct measured by each scale and within-group membership was influential irrespective of time.

A one-way ANOVA on data from Year 2 revealed a significant between-subjects effect for Negative Mood [$F(2, 181) = 10.53$, $p < .001$], Interpersonal Problems [$F(2, 181) = 6.64$, $p < .01$], Ineffectiveness [$F(2, 181) = 7.03$, $p = .001$], Anhedonia [$F(2, 181) = 5.19$, $p < .01$], and

Negative Self-Esteem [$F(2, 181) = 9.88, p < .001$]. Results of the follow-up post-hoc tests are found in Table 1. After a Bonferroni correction to control for Type I error, there was a significant difference between retained and low-performing control students ($p < .01$) and retained and control students ($p < .001$) for Negative Mood. A similar result was observed for Interpersonal Problems between retained and low-performing ($p < .01$) and retained and control ($p < .01$). For Ineffectiveness, there was a significant difference among subjects in the retained and low-performing control groups ($p < .05$) and the retained and control groups ($p = .001$). The only significant difference on Anhedonia was between the retained students and the control students ($p < .01$). A statistically significant difference was indicated between the retained and low-performing control students ($p = .001$) and retained and control students ($p < .001$) on Negative Self-Esteem.

Results of the one-way ANOVA for Year 3 data reflected a significant main effect of group membership on Negative Mood [$F(2, 71) = 4.1, p < .05$], Interpersonal Problems [$F(2, 71) = 5.44, p < .01$], Ineffectiveness [$F(2, 71) = 9.38, p < .001$], Anhedonia [$F(2, 71) = 3.56, p < .05$], and Negative Self-Esteem [$F(2, 71) = 4.03, p < .05$]. A series of post-hoc tests were again conducted with the Bonferroni correction to determine significant differences between scores based on group membership and are displayed in Table 2. The retained and control groups were significantly different ($p < .05$) from each other on Negative Mood. A statistically significant difference was found among the retained and low-performing control students ($p < .05$) and retained and control students ($p < .01$) for Interpersonal Problems. On ratings of Ineffectiveness, the control group was significantly different from the retained group ($p < .001$) and the low-performing group ($p < .05$). There was no significant difference between the retained and low-performing control students. Students in the retained group reported scores that were

significantly different from the control group on Anhedonia ($p < .05$) and Negative Self-Esteem ($p < .05$).

The demographic variables of free- or reduced-price lunch, race, and special education were again entered as covariates to evaluate the effects of group membership on the Self-Perception Profile for Children (SPPC). Results of the MANCOVA for Year 1 data indicated that the overall effects of group membership continued to be statistically significant for Scholastic Competence, Social Acceptance, Athletic Competence, Physical Appearance, and Behavioral Conduct scores ($\lambda = .83$, $F(10, 478) = 4.81$, $p < .001$, $\eta^2_p = .09$). Similar statistically significant overall effects were found after including the covariates for Year 2 ($\lambda = .79$, $F(10, 348) = 4.47$, $p < .001$, $\eta^2_p = .11$) and Year 3 data ($\lambda = .73$, $F(10, 128) = 2.14$, $p < .05$, $\eta^2_p = .14$).

The results from a series of repeated measures ANOVAs revealed no statistically significant main effect of time on scores from each of the five SPPC scales. Furthermore, no significant interactions between time and group membership were present. Despite time not playing a significant role, group membership still influenced the self-reported ratings from year to year.

One-way ANOVAs were conducted on scale scores of the SPPC from each year of data collection. Results from Year 1 revealed a significant between-subjects main effect for Scholastic Competence [$F(2, 246) = 19.87$, $p < .001$], Social Acceptance [$F(2, 246) = 5.54$, $p < .01$], Physical Appearance [$F(2, 246) = 3.47$, $p < .05$], and Behavioral Conduct [$F(2, 246) = 10.59$, $p < .001$]. A significant main effect was not found for Athletic Competence [$F(2, 246) = 2.8$, $p = .063$]. Results of the post-hoc tests using a Bonferroni correction are summarized in Table 3. A statistically significant difference was identified among the mean scores for all three groups on Scholastic Competence ($p < .05$). For Social Acceptance, students in the control

group were significant from the retained students ($p < .05$) and the low-performing students ($p < .05$). A significant difference was not observed between retained and low-performing control students on this scale. Subjects in the retained and control groups were significant from each other on the Physical Appearance ($p < .05$) scale. Finally, the control group had significantly different scores than the retained ($p < .001$) and low-performing groups ($p < .05$) for Behavioral Conduct.

Results from a one-way ANOVA on Year 2 data continued to reflect a statistically significant main effect for Scholastic Competence [$F(2, 181) = 12.91, p < .001$], Social Acceptance [$F(2, 181) = 3.54, p < .05$], and Behavioral Conduct [$F(2, 181) = 5.31, p < .01$]. The Athletic Competence [$F(2, 181) = .09, p = .91$] and Physical Appearance [$F(2, 181) = 1.99, p = .14$] scales did not reach significance. The post-hoc analyses in Table 4 revealed significant differences on Scholastic Competence between control and retained students ($p < .001$) and control and low-performing students ($p = .001$). Scores of those in the retained and low-performing groups were not significantly different from each other. On the Social Acceptance scale, the low-performing control students and the control students were found to be significantly different ($p < .05$). The Behavioral Conduct scores for retained subjects were significantly different than the low-performing ($p < .05$) and control subjects ($p < .01$).

The final one-way ANOVA conducted on Year 3 scores from the SPPC resulted in one significant main effect for Scholastic Competence [$F(2, 71) = 6.91, p < .01$]. All other scales failed to reach significance; however, Behavioral Conduct almost met criteria [$F(2, 71) = 3.08, p = .052$]. For scores on the Scholastic Competence scale, retained students were significantly different from the low-performing control ($p < .05$) and control students ($p = .001$). These follow-up findings are presented on Table 5.

CHAPTER 5

DISCUSSION

The aim of the current study was to explore the relationship between experiencing grade retention, levels of depression symptoms, competence, and self-adequacy during adolescence. After controlling for demographic variables that were observed to have a significant difference between comparison groups, results indicated a statistically significant overall effect for group membership on scores for each scale of the CDI. That is, retention status had a meaningful impact on ratings of Negative Mood, Interpersonal Problems, Ineffectiveness, Anhedonia, and Negative Self-Esteem in comparison to students who were not retained. The same significant effect was found across the two years that the CDI was included in the assessment battery. An analysis on the effect of time and its interaction with group membership revealed no significant changes in scores for each scale of the CDI. This was an unexpected result given that previous research has found an increase in depression symptoms over the teenage years (Schraedley et al., 1999).

Further analyses on differences between the groups within each year of CDI data collection found statistically significant main effects. For Year 2, the retained students provided ratings that were significantly different from the low-performing control and control groups on Negative Mood, Interpersonal Problems, Ineffectiveness, and Negative Self-Esteem. Only students in the control group had significantly different scores from the retained group on Anhedonia. The main effect for group was again significant for Year 3 but the pattern of group differences was unlike from the previous year. In Year 3, the retained student had scores that

were significantly different from the low-performing control on Interpersonal Problems but nowhere else. They were significantly different from students in the control group across all five scales.

The significant difference in scores on the Interpersonal Problems scale across both years seems to support the conclusions of research studies on the role of the immediate social environment in depressive symptoms (Allen et al., 2006; Aseltine et al., 1994). Family and friends play a vital role in the process of development and difficulties with establishing a supportive social network can undermine psychological functioning. One study demonstrated poorer social adjustment (-.27), emotional adjustment (-.37), and self-concept (-.19) for retained students in comparison to promoted students (Holmes & Matthews, 1984). The experience of retention might have created a vulnerability for developing good interpersonal relationships, which is a stage-salient developmental issue for a sense of competence (Cicchetti & Schneider-Rosen, 1986). Individuals who are retained could exhibit a tendency to make disparaging social comparisons that further exacerbate their attempts to connect with others. A reciprocal relationship between the individual and the environment exists in which the context is selected and modified for the purpose of offering opportunities towards development.

This study also investigated whether being retained was associated with differences in ratings of competence and self-adequacy when compared to peers who were on grade level. The overall effect of group membership was statistically significant for each scale of the SPPC across all three years of data collection even after controlling for demographic variables. Those students who were chosen to be retained self-reported scores on Scholastic Competence, Social Acceptance, Athletic Competence, Physical Appearance, and Behavioral Conduct that were significantly different from the comparison groups. Additional analysis was conducted on the

influence of time and any interaction with group status; however, no significant change on SPPC scale scores was found. This last finding and the similar one for scores on the CDI reflect a stability of each construct being measured due to membership in a particular group as opposed to time being an influential factor.

Analyses on the presence of differences between scores for SPPC data for Year 1 revealed a significant main effect for Scholastic Competence, Social Acceptance, Physical Appearance, and Behavioral Conduct. Within Year 1, retained students had scores that were significantly different from the low-performing control students on Scholastic Competence. The main effect of group was revealed to be significant for Scholastic Competence, Social Acceptance, and Behavioral Conduct in Year 2. Students in the retained group had scores that were significantly different from the low-performing control group on Behavioral Conduct. Interestingly, the low-performing control students were significantly different from the control students on Social Acceptance; no other differences were observed. In fact, the retained students' mean score was slightly higher than the low-performing controls, which reflects higher perceived competence in Social Acceptance. Finally, results of the main effect for group were significant only for Scholastic Competence in Year 3. The scores for retained students were significantly different than those for the low-performing control students.

The results on Scholastic Competence for Year 1 and Year 3 support the argument from researchers and scholars that retention does not address the academic needs of those students (Ferguson, 1991; Fine & Davis, 2003; Jimerson et al., 1997). If retaining a student achieves the intended goal of improving the academic performance of the student, then that individual should be at the very least similar to matched-ability peers. In this case, the retained students perceived themselves to have greater difficulty with schoolwork and a diminished sense of intelligence.

Findings from Year 2 on the Behavioral Conduct scale also support findings that argue against the use of grade retention for remediating behavior concerns (Jimerson et al., 1997; Jimerson & Ferguson, 2007). The retained students in this study had the perception that they struggle with doing the right thing, usually get into trouble, and find it hard to behave. Moreover, the recognition that these students have with regard to their sense of competence and self-adequacy can have implications for the course of development during the adolescent period (Blechman et al., 1986; Cole, 1991).

Limitations

Several limitations of the current study should be noted. First, the CDI was not introduced to the assessment battery until the second year of data collection. Information across all three years of middle school would offer a more comprehensive picture of self-reported depression ratings. Second, although the study data was collected over a few years, this time period was immediately following and prior to major educational transitions. The adjustment from elementary to middle school and from middle school to high school could have an impact on depression and self-perception scores. Third, the sample size decreased in size as students left the middle school to attend high school. By the third year, the overall sample was drastically reduced and might have impacted the power to detect significant differences between comparison groups. Fourth, the generalizability of results from this study should be taken into account. Studies conducted in other parts of the country could produce different results given the context. Furthermore, this study contained a high percentage of White students and a smaller representation of African American and Hispanic students. The outcomes might not be the same for school systems with a higher percentage of minority students. Fifth, as suggested by Harter (1985), an interpretation of self-perception scores should consider the influence of social

reference groups, direct or indirect feedback on performance from significant people in the child's life, and perceived locus of control. The current study did not utilize this more thorough approach to assessment.

Implications for Future Research

Future research investigating the influence of grade retention on depression symptoms and self-perception during adolescence should consider a longitudinal design that includes major educational transitions. Adolescence can be a tumultuous stage of development and adjustment to changes in educational settings might differentially predict psychological outcomes for students who were retained. An examination of variables that moderate (e.g., gender, race/ethnicity, SES, special education status, age at retention) the relationship between grade retention and psychological constructs would make a valuable contribution to the extant literature. Additionally, potential mediators should be included in future research efforts. The individual's perception of being retained, negative attributional style, persistent rumination, and attachment to the school environment are all possible candidates. Another area for future research is controlling for conditions that are comorbid with depression; for example, anxiety, conduct disorder, and substance abuse.

Overall, the current study demonstrated a negative effect of grade retention on adolescent ratings of depression and self-perception. The retained students reported higher depression scores and lower perceptions of competence and self-adequacy within several domains when compared to their low-achieving but promoted peers. The differences in ratings were even more extensive between retained students and typically achieving students. Many of the professionals who make the decisions to retain a student are not witness to the outcomes several years later. A student's improvement in the short-term may not last as the individual encounters more

challenges and continues to lack the necessary adaptive skills. Development is an ongoing process concerning countless reciprocal interactions with the social and physical environment. The competencies, or lack thereof, that emerge from this constant interplay are integral for positive psychological growth. Despite the age of educational accountability in which contemporary students attend school, the selection of interventions to improve academic, social-emotional, and behavioral problems should extend beyond the “one size fits all” model of grade retention and match individual needs.

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Table 1

Means and Standard Deviations of Comparison Groups on CDI Scales For Year 2

Group	Negative Mood		Interpersonal Problems		Ineffectiveness		Anhedonia		Negative Self-Esteem	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
R (<i>n</i> = 31)	4.35	3.13	1.58	1.63	2.71	1.75	5.03	2.97	3.35	2.61
LPC (<i>n</i> = 79)	2.47**	2.47	.66**	1.09	1.72*	1.78	3.86	3.58	1.62***	2.09
C (<i>n</i> = 74)	1.78***	2.54	.66**	1.31	1.27***	1.82	2.85**	2.99	1.35***	2.03

Note. R = retained; LPC = low-performing control; C = control. Asterisks indicate significant differences between the particular comparison group and the retained group.

* $p < .05$. ** $p < .01$. *** $p \leq .001$.

Table 2

Means and Standard Deviations of Comparison Groups on CDI Scales For Year 3

Group	Negative Mood		Interpersonal Problems		Ineffectiveness		Anhedonia		Negative Self-Esteem	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
R (<i>n</i> = 13)	4.46	3.59	2.23	2.42	3.31	2.39	5.54	3.07	3.31	3.09
LPC (<i>n</i> = 33)	3.03	3.11	.97*	1.38	2.03	1.86	4.15	3.55	1.73	2.27
C (<i>n</i> = 28)	1.71*	2.34	.64**	.83	.82***	1.22	2.71*	3.00	1.11*	1.93

Note. R = retained; LPC = low-performing control; C = control. Asterisks indicate significant differences between the particular comparison group and the retained group.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3

Means and Standard Deviations of Comparison Groups on SPPC Scales For Year 1

Group	Scholastic Competence		Social Acceptance		Athletic Competence		Physical Appearance		Behavioral Conduct	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
R (<i>n</i> = 48)	2.49	.55	2.79	.74	2.57	.61	2.48	.82	2.64	.60
LPC (<i>n</i> = 102)	2.75*	.63	2.86	.59	2.81	.62	2.77	.73	2.89	.54
C (<i>n</i> = 99)	3.11***	.55	3.10*	.60	2.80	.66	2.81*	.73	3.11***	.64

Note. R = retained; LPC = low-performing control; C = control. Asterisks indicate significant differences between the particular comparison group and the retained group.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4

Means and Standard Deviations of Comparison Groups on SPPC Scales For Year 2

Group	Scholastic Competence		Social Acceptance		Athletic Competence		Physical Appearance		Behavioral Conduct	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
R										
(<i>n</i> = 31)	2.52	.49	3.03	.54	2.75	.63	2.42	.93	2.63	.49
LPC										
(<i>n</i> = 79)	2.73	.58	2.92	.72	2.81	.75	2.76	.75	2.99*	.55
C										
(<i>n</i> = 74)	3.07***	.57	3.20	.64	2.79	.72	2.71	.79	3.06**	.72

Note. R = retained; LPC = low-performing control; C = control. Asterisks indicate significant differences between the particular comparison group and the retained group.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5

Means and Standard Deviations of Comparison Groups on SPPC Scales For Year 3

Group	Scholastic Competence		Social Acceptance		Athletic Competence		Physical Appearance		Behavioral Conduct	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
R (<i>n</i> = 13)	2.36	.49	2.96	.64	2.63	.41	2.50	.57	2.67	.51
LPC (<i>n</i> = 33)	2.85*	.54	3.07	.45	2.81	.67	2.86	.67	2.90	.52
C (<i>n</i> = 28)	3.05***	.61	3.26	.65	2.69	.64	2.71	.80	3.13	.65

Note. R = retained; LPC = low-performing control; C = control. Asterisks indicate significant differences between the particular comparison group and the retained group.

* $p < .05$. ** $p < .01$. *** $p \leq .001$.