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Self-esteem levels of adolescents with learning disabilities or mental retardation in inclusive or non-inclusive educational settings

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SELF-ESTEEM LEVELS OF ADOLESCENTS WITH LEARNING DISABILITIES OR MENTAL RETARDATION IN INCLUSIVE OR NON-INCLUSIVE EDUCATIONAL SETTINGS

by
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ABSTRACT

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This investigation compared the global, personal, and social self-esteem levels of adolescents with learning disabilities or mild-to-moderate mental retardation. The purpose was to determine differences between the adolescents based on their disability, educational setting of inclusion or non-inclusion, and by gender. The sample of this study included nine females and 22 males between the ages of 13 and 21 years who lived in southern New Jersey.

Students were given the Culture Free Self-Esteem Inventories-Third Edition, a 67 item self-report, norm-referenced instrument. Mean scores for each group were compared and analyzed by using a one-way ANOVA, a two-way ANOVA, and descriptive statistics.

All of the groups reported "below average" self-esteem levels for the mean scores for the global quotient and personal and social self-esteem levels. No statistically significant differences were found between the groups.

A need for further research targeting a larger and more diverse representation of this population was indicated. A disqualification rate of 42% for the initial test scores for adolescents with mental retardation because of high defensiveness factor scores was noted.

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Chapter I: The Problem

Need

Students with learning disabilities frequently experience social, emotional, and/or personal difficulties that are quite serious and highly resistant to treatment. As a result of their learning problems, they may have difficulty understanding social cues, and may misinterpret the subtleties of interpersonal communication. This can result in ineffective interactions with peers that can lead to low self-esteem and negative emotional consequences (Hardman, Drew, & Egan, 2002). Adolescence can be particularly difficult because peer interactions play a crucial role in the development of identity of self. Social acceptance from peers ranks second only to physical appearance in importance to adolescents' overall sense of worth and well-being (Arnett, 2001).

Good global self-esteem is the contributor to possessing a sense of efficacy, or the belief that one can achieve what one sets out to do, and is a significant factor in success in employment. Feeling confident and effective is especially important for young adults who are preparing to enter the workforce with a disability. According to a 1998 National Organization on Disability/Harris poll, 71% of people with disabilities are not working full-time or part-time, compared to 21% of the non-disabled people. Of the disabled people who were not working, 72% would have preferred to be working (Hardman, et al,

2002). Work is a vital part of creating a successful lifestyle in adulthood, and schools have been given the job of preparing their adolescent students for adult life and society.

For adolescents in special education, inclusion in the school system means daily interactions with and exposure to non-disabled peers. For many, these interactions will not be experienced as socially successful overall, and therefore will have the potential to effect their social/emotional/personal development in a negative way. As a result of these interactions, self-esteem levels may be different for inclusive special education students compared to their peers in special education who have been placed in exclusionary (non-inclusive) school settings.

It is therefore imperative, when placing an adolescent in special education and considering an inclusion or non-inclusion setting, that the student's social/emotional/personal development and needs be reviewed carefully in consideration of the potential long-reaching ramifications.

Purpose

This study will investigate the effects on the social/emotional/personal development of adolescents in special education as a result of the frequency of interactions that they have on a daily basis with their non-disabled peers. The measurement of the effect will be perceived self-esteem levels as reported by adolescents who are included in regular education classrooms compared to those who are not. The purpose of this study is to determine whether or not frequent peer interactions with non-disabled students negatively affect adolescent special education students' overall sense of self-esteem.

Hypothesis

Adolescents in special education in regular school settings who have continual exposure to interactions with non-disabled peers will experience lower self-esteem than adolescents in special education who interact primarily with other special education students in an exclusionary setting.

Theory

Many students in special education are delayed in various developmental processes. The delays may be significant in identifiable areas, or moderately pervasive in numerous areas. If the student is delayed in a way that affects cognition, he cannot perform thinking and learning tasks on the same level as his unaffected peers. While this obviously affects his scholastic performance, it also presents a formidable obstacle to socially satisfying peer interactions, a particularly frustrating circumstance for adolescents in general, who need to be able to identify with other teenagers. For adolescents, friends are vitally important, as they seek to form their own identities and separate themselves from their families (Arnett, 2001).

For the exceptional student, possible misinterpretations of social cues and subtleties, the growing awareness of discrepancies in academic abilities, and general lack of commonality in experiences all serve to further widen the communication gap between regular and special education students. While this can occur in elementary and beginning middle school inclusion classes, it becomes especially problematic for the inclusive

special education student in late middle school and early high school classes because most of his peers have begun to operate socially on another level that he may never attain. Peer influence is especially strong at this age (Papalia & Olds, 1982), and there is a tendency for many non-disabled students to go along with the crowd and join in avoiding the student with disabilities who doesn't fit the accepted mold. Lack of real peer acceptance and the realization that he is irreversibly different, and not just in learning abilities, can have a detrimental effect on how the student with disabilities perceives his self-worth.

The cognitive approach to psychology is concerned with higher mental functions pertaining to perception, concept formation, memory, language, problem solving, and decision-making. The main goal of cognitive theories is be able to make reasonable and practical inferences about the processes that occur between input, or stimulus, and output, or responses.

Jean Piaget (1896-1980) was a Swiss psychologist and a cognitive theorist whose research and theories still have a profound effect today on education and psychology. His theory of how thinking and learning changes with age is called a cognitive-developmental approach. His observations of children convinced him that older children, in addition to knowing more, actually think differently from younger children, and that children go through predictable stages of cognitive maturation that can be categorized by the way that they perceive and process their worlds.

He believed that each person has an individualized genotype for cognitive development and that successive stages are activated only through biological maturation (Arnett, 2001). His viewpoint was that the effect of the environment is limited; only

maturation can change the ability of a child to think and learn in a more advanced way. For example, a teacher cannot teach a ten-year-old student something that only a fourteen-year-old student has the ability to learn.

Piaget's four stages of cognitive development are: sensorimotor (age 0-1), preoperational (age 2-7), concrete operations (age 7-11), and formal operations (age 11-15 to 20). The ending phase of concrete operations and the beginning and middle phase of formal operations are the two stages that would characterize most adolescents.

In concrete operations, the child is capable of using mental operations only in concrete, immediate experience. He thinks from a rule-regulated viewpoint. He has difficulty thinking hypothetically.

However, when he moves on to formal operations, he is capable of thinking logically and abstractly. He can formulate and test hypotheses and can think about thinking (metacognition). He develops strong idealism. His thinking and the way that he interacts with his world become more complex. These changes greatly alter how he experiences his social environment. Communication and relationships have many more dimensions than they did at the preceding stage of development. Following Piaget's theory, the inclusive special education adolescent would be at a distinct disadvantage in forming and developing friendships, because his peers would be more likely to seek out and sustain relationships with teenagers who are functioning at similar levels.

This approach contrasts with the behavioral approach in psychology. The behavioral approach examines the relationships between behavior and what precedes it, and the resulting consequences. Proponents of the behavioral approach to inclusive education believe that students with inadequate social skills can benefit from observing and

modeling the appropriate age-level behaviors of their non-disabled peers. Their reward is greater social acceptance. Piaget believed that you simply could not make a student internalize a more advanced way of thinking until he passed to that next stage as a result of his own biological volition. Using Piaget's theory, it can be reasoned that while imitating may initially cause the student to act in a more socially acceptable way, the student may not be capable of translating these more desirable reactions to new situations, because he is simply not capable of thinking at a more advanced level on his own.

Albert Bandura (1925-) is a prominent psychologist who evolved in his beliefs from pure behavioralism to a more socially oriented approach that included cognition. He believes that people learn through observation and imitation, but cognitions drive actions. Thus the ability to think, symbolize, hypothesize, and anticipate the consequences of behavior are also influential in determining actions along with rewards or punishments. Students with cognitive impairments may not be capable of this logic and abstract thinking.

While behavioral and cognitive approaches both have merit and a place in the education setting, the cognitive and social-cognitive approach would lead to questions and subsequent investigation to examine the effects of inclusion on social, emotional, and personal development in adolescence.

Definitions

Adolescence is the period of life that starts when puberty begins and continues until maturity, when the person prepares to take on the role and responsibilities of adulthood as defined by his culture. For purposes of this study, adolescence refers to the ages of 13 to 21.

A student with a *learning disability* has difficulty in learning a basic scholastic skill because of a disorder (such as dyslexia) that interferes with the learning process (as in understanding or using language). Learning disabilities may include delays or deficiencies that affect *cognition*, which means the act or process of thinking and knowing, including awareness and judgment. Students with *cognitive delays* do not process information at the level that would be expected compared to others of the same age. These students may receive appropriate special education services in a general education classroom and may be pulled out to a special education classroom or a resource room for some of the time. This is called *inclusion. Non-inclusion* means attending a separate school, or attending all classes in a special education classroom. Non-inclusive students have very little interactions with non-disabled peers.

Interaction with a peer refers to communication that is reciprocal. It can be verbal or non-verbal, consisting of expressions and body language that convey emotions and attitudes as well as spoken exchanges. Interactions that result in peer acceptance can contribute to good self-esteem. *Self-esteem*, as defined by Merriam-Webster's Collegiate Dictionary (2000), is "1: a confidence and satisfaction in oneself: self-respect. 2: self-concept." Self-concept is defined as "the mental image one has of oneself." (Merriam-

Webster, 2000). *Global self-esteem* is an overall sense of worth and well-being. In early adolescence, self-esteem contributes to the development of *self identity*, which is a person's various views of themselves, encompassing personality, roles, relationships, and physical characteristics.

Developmental processes refer to natural, gradual processes like physical, intellectual, social and personality development that go through successive stages. The baseline that is used to determine if the processes are developing on schedule is the average performance of all children of the same age and grade level.

A *cognitive approach* to psychology is concerned with the processes of thinking, and a *cognitive-developmental approach* emphasizes how thinking and learning change with age. A *behavioral approach* to psychology focuses on conditions that lead to behavior and the resulting behavior. A *social-cognitive approach* looks at how people influence each other and at how social behaviors are acquired through imitation.

Jean Piaget was a cognitive theorist who defined the successive stages of cognitive development. One of these, *concrete operations*, refers to thinking that is based only on immediate, concrete experiences and is characteristic of ages of 7-11. The stage after concrete operations is *formal operations*, from the ages of 11-15 to 20. Thinking in formal operations becomes logical, abstract, and complex. An individual in this stage becomes capable of *hypothesizing* (making a tentative assumption with the intention of testing its consequences).

Assumptions

The assumptions of this study are that the testing conditions are the same and are controlled for the population that will be tested. It is assumed that the independent variable of an inclusive or non-inclusive setting for each student has the same meaning for each student's educational setting. It is assumed that the dependent variable, the students' individual levels of self-esteem, accurately represents the same concept and that the test represents a true measurement of that concept. It is assumed that integrity of the students' responses to the test questions are absolute, and not compromised or influenced by others.

Limitations

The findings of this thesis can be generalized to the adolescent student who is in special education providing that the following limitations are considered.

The population that was sampled had limited demographics. All respondents were from southern New Jersey living in a suburban setting; none were from an urban setting. The majority of the inclusive students belonged to the lower or middle social economic classes, but all of the non-inclusive students were middle class.

The range of disabilities that each student had was varied. Only a few of the students that were tested had severe physical disabilities, some had mild physical disabilities, and some had none at all. All of the students had some type of learning disability, and some had mild or moderate mental retardation as well. The population sampled was too small

to have disabilities grouped more diversely; thus the designation of either mental retardation or learning disability was used for classification purposes.

There are limitations on the test results as well. Testing would have ideally been done with all students at the same time, and with the same instructor under the same conditions. Since this was not possible, approximately half of each group took the test with their parent as the administrator. (The rest of the group took the test in three groups under controlled conditions, given by three different instructors.) Some of the responses might have been influenced by the presence of the parent, even though every effort was made to impress upon the parent the importance of not influencing their student's responses in any way. It is also likely that each parent explained the survey in a slightly different way, which again might have influenced responses. Testing conditions were likely to have some variations; for example, the time of day that it was given and consequent varying status of mental alertness of the student.

Overview

Studies and research relating the importance of self-esteem to social/emotional/personal development, self-esteem's effects on later adulthood, and the effects of peer interactions on self-esteem will be discussed in Chapter II. Related studies concerned with peer interaction between students, including those who have disabilities and those who do not will also be explored in Chapter II. Any similarly designed study whose author(s) has addressed the same subject area as this author is addressing in this thesis will be examined.

In Chapter III, the population sample for the test, which is a self-esteem inventory, will be identified and their characteristics will be described. The test measure itself will be described, and the design of the test will be explained. The reliability of this instrument will be established. A testable hypothesis will be offered, and this author will designate which model will be used to test the hypothesis.

The results of the actual testing will be fully analyzed in Chapter IV. As this process proceeds, the hypothesis will be restated and the results will be listed and subsequently interpreted. Finally, the results will be summarized.

As this study explores the question of what the effects (if any) are of inclusion on the social/emotional/personal development of the adolescent student with a learning disability, the next task becomes investigation through research, beginning with a review of the published literature and related studies of the subject matter.

Chapter II: Review of Literature

Factors Pertaining to Lowered Self-Esteem

While there are probably a number of reasons that one would expect children who have been classified as learning disabled to have a lowered sense of self-esteem, several influential factors have been identified as major contributors. It could be expected that as part of the process of being labeled, the children have experienced considerable failure and negative competence feedback at school. The very fact of being labeled may have affected self-esteem. Being in special classes may carry unwanted stigma (Grolnick & Ryan, 1990). However, the two principal causal factors generally agreed upon are the social skills deficits of children with learning disabilities, and the low academic self-concept that many of these children possess. A third factor, not as well-discussed or researched, may be the role of parental perceptions. Low expectations by parents may be communicated to students, who then perform down to these expectations in a self-fulfilling prophecy (Stone, 1997).

The Role of Social Skills Deficits in Lowered Self-Esteem

The social skills, social perception, and social functioning of children with learning disabilities has been discussed, researched, and examined quite thoroughly. Less has been

done for the sub-groups within the heterogeneous category of "learning disabilities". Individuals with lower than average intelligence and lower cognitive abilities, such as in mental retardation, have been included in most studies along with individuals with average intelligence that have other learning disabilities.

As early as the 1970's, research began to emerge on the correlation of social competence and learning disabilities. It became apparent that many students with learning disabilities had an assortment of social skill deficits that created problems with social competence. Social competence can be defined as a three-part process; the ability to perceive and interpret social situations, generate appropriate social responses, and initiate a strategic behavioral response (Kavale & Forness, 1996). These problems may be evident as early as kindergarten and prior to the formal assessment of the learning ability, will likely continue throughout the school years, and can persist into adulthood (Kavale & Forness, 1996).

Lack of this competence, both as a trait and a behavior, has a potential negative impact on both social and academic achievement. It has been demonstrated that social skills problems may exacerbate achievement problems, as well as increase the probability of referral (LaGreca & Stone, 1990). Other negative implications include a heightened risk for adolescents and adults for school dropout, psychiatric dysfunction, juvenile delinquency, and criminal behavior (Parker & Asher, 1987). Knoff (1983) reviewed literature to conclude that continuous negative self-concept experiences may result in a unique behavioral pattern of emotional disturbance for these individuals.

Research by Jackson, Enright, and Murdock (1987) established that social perception problems are not merely a developmental lag. These problems pertain to a perceptual

deficit that will generally remain proportionally different when compared to students without learning disabilities throughout the school years. They hypothesized that the lessened ability to appropriately interpret nonverbally expressed emotion was caused by "reduced visual motor organization", or a perceptual deficit. Students with and without learning disabilities of the ages of 11, 14, and 17 were tested using the Profile of Nonverbal Sensitivity and The Four Factor Tests of Social Intelligence to show that while both groups improved with age, the gap persisted proportionally up through the age of 17. When it is considered that 90% of communication in a social transaction is nonverbal (Mehrabian, 1968), the contribution that a lack of social perception makes to social skills deficits becomes obvious.

A meta-analysis of 152 studies by Kavale and Forness (1996) used quantitative synthesis to show that, on average, 75% of students with learning disabilities demonstrated social skills deficits when compared to their normally achieving peers. The assessments of the deficits were performed by teachers, peers, and student self-assessments. Results did not vary significantly across the groups. Teachers believed the lack of goal-directed and attending behaviors to be the most important social difficulties. Peer evaluations showed that students with learning disabilities were subject to limited acceptance or rejection. They were perceived to have lower social status and to be less popular. They were viewed as not as cooperative and not as competent in communication. In a clear indication that peers tend to not socialize with students with learning disabilities, the results found that seven out of ten of these students would not be considered or chosen as friends by their normally achieving peers. More than seven out of ten students with learning disabilities rated themselves as possessing social skills

deficits. The largest difference that they saw between themselves and their peers was in the area of academic competence, followed by deficits in interpreting nonverbal communication. Results of other tests showed that more than eight out of ten students with learning disabilities were less able to comprehend aspects of nonverbal communication and were deficient in areas of social problem solving.

In a paper presented at the annual meeting of American Educational Research, Bryan and Pearl (1982) found that children with learning disabilities who were mainstreamed in third to eighth grade appeared to respond to interpersonal interactions with a differential, submissive stance.

Nitcavic and Aitken (1988) examined 340 tests about interpersonal needs and expectations from students with learning disabilities in sixth to eighth grade who had been mainstreamed. They concluded that while the majority of the students appeared to function successfully in a regular classroom, one-third had a major problem with reticence.

Using a self-report, non-structured interviews, and participant and non-participant observation, Krutilla and Benson (1990) studied 15 adolescent students with learning disabilities to ascertain their self-identity in a public school environment. Their research found that many of these students had been devalued and belittled by significant others (peers, teachers/administrators, and sometimes parents) in social interactions, producing negative perceptions of self-identity and low self-esteem (Krutilla & Benson, 1990).

A literature review by Price (1988) of 28 references concludes that the "lasting psychosocial ramifications of learning disabilities often include a pervading sense of low self-esteem".

The Role of Academic Self-Concepts in Lowered Self-Esteem

Many of the studies examined thus far in this thesis have deduced that low academic self-concepts appear to be tied to low global self-worth (Renick, 1985). Avazian and Wood (1987) reviewed literature that focused on assessing the effects of learning disabilities on a child's self-concept. They concluded that children with learning disabilities do have lower academic and general self-concepts, with a "positive, consistent relationship between academic achievement and self-concept." In other words, a student who feels competent academically, irregardless of the class placement or difficulty, also correlates this perceived competence to his positive value as a person. Feeling competent enhances learning ability, and fosters positive school attitudes. While this phenomenon applies to all adolescents, irregardless of cognitive ability, a student with a learning disability that affects his academic performance is especially vulnerable to the self- perception that he is not as successful compared to other students. His awareness, or absence of awareness, of this perceived competence influences his overall sense of self-worth.

In a thorough study, Filozof, et al. (1998) investigated whether self-esteem variables preceded academic behaviors and beliefs. Their study involved 593 multi-ethnic ninth and tenth graders from rural to inner-city urban high schools in the south. To avoid the bias that may be associated with a single self-report, they used pre-test (beginning of the school year) and post-test (end of the school year) self-reports as well as direct reviews of school grades and attendance records. Data was collected on home self-esteem as well as school self-esteem, because of their belief that there is a strong correlation between

parental involvement and educational attainment (Filozof, Albertin, Jones, Steme, Myers, & McDermott, 1998).

Results showed significant associations existed between both areas of self-esteem and the continuous level academic variables. They found that the students' average home and school esteem levels rose correspondingly to perceived academic progress, and also with aspirations to higher levels of education. In conclusion, they offer the premise that how students do in school influences their subsequent self-esteem both academically and as a family member (Filozof et al., 1998).

This supports the importance of careful consideration of educational placement for a student with a learning disability. It is essential that the student be placed in a setting that allows him to feel competent both socially and academically, since these concepts are intertwined and supportive of each other. Hagborg (1996) suggests that social support both within and outside of school is vital to attain an adequate level of academic self-concept for students with learning disabilities.

The Role of Parental Expectations in Lowered Self-Esteem

Relatively few studies have been done that have specifically focused on the dynamics of the interactions between adolescents with learning disabilities and their parents that may affect the child's self-esteem. Parental expectations are important; it is impossible for children to be completely ignorant of, or unaffected by, their parents' opinions, which may be expressed openly or overtly. If parents have lowered expectations of their child's

abilities, it may result in lowered self-expectations and consequent poor performance in a self-fulfilling prophecy. Poor academic performance can contribute to low self-esteem.

While studies have shown that the parents of adolescents with learning disabilities generally do have lowered expectations for their children, this might be a reasonable assumption in view of the circumstances. Some researchers feel that this is both "realistic and adaptable" (Tollison, Palmer, & Stowe, 1987). The question, however, is what constitutes unreasonably low or overly general expectations. Parents may fail to provide appropriate challenges and supports for learning if their expectations are incongruent with the child's actual capabilities.

In a study by McLoughlin, Clark, Mauck, and Petrosko (1987), 80 adolescents with learning disabilities and their parents participated in a survey where they were asked to rate the adolescents for ten areas of functioning. The parents rated their children lower than the children themselves in all ten areas; six of the differences were statistically significant. Those six areas were School Reading, Pleasure Reading, General Information Reading, Written Expression, Science, and Social Studies /History.

A study on maternal expectations was done by Tollison et al. (1987) with the mothers of 15 boys with learning disabilities and 16 normally achieving boys. The mothers were asked to rate their confidence that their sons would perform "like other children his age", and then were asked to give the test to their sons and permitted to help them in any way that they chose. It was found that the expectations of the mothers of the normally achieving boys correlated positively with their sons' performance, but the correlation was negative for the expectations of the mothers of boys with learning disabilities (Tollison, Palmer, & Stowe, 1987).

An ambitious study was undertaken by Stone (1997) that added the special education teachers' perceptions along with comparisons between adolescents with learning disabilities and their parents' perceptions of their academic skills. A general pattern of differences emerged. It showed that the adolescents tended to rate themselves higher than both teachers and parents. Teachers and parents were more comparable in the absolute level, but parents and teachers had significantly different ratings in five skill areas: Reading Comprehension, Arithmetic Calculation, Study Skills, Planning and Organization, and Motivation and Effort. The parents rated their children lower than the teachers did. It could be that while the parents were using all children of the same age as a reference group, the teachers were using other children in special education classes for comparison (Stone, 1997). As for the adolescents themselves, overestimations of abilities are common findings in literature (Adelman, Taylor, Fuller, & Nelson, 1979). Two possible explanations have been offered. First, poor meta-cognition skills may cause a child to underestimate the difficulty of a task, and therefore overestimate his ability to perform it (Slife, Weiss, & Bell). Second, Alvarez and Adelman (1986) argue that overestimations by students of their ability may be due to self-protectiveness on the part of the student.

The findings in these studies, taken along with the finding that parents of normally achieving children, in contrast, most frequently overestimate their child's linguistic and cognitive capabilities (Miller, 1998), point out the possibility that children with disabilities may experience lower self-esteem as a side effect of their parents' unreasonably low or overly general expectations, which are communicated and subsequently absorbed into the child's modus operandi.

When an adolescent with a learning disability is included in a regular education classroom, his peers then become normally achieving students.

For a student who has a learning disability combined with the perception that he is successful academically and possessing a good sense of global self-worth, this placement may provide him with many benefits. It will most likely be the "least restrictive environment" that he is entitled to under Public Law 105-17, Amendments to the Individuals with Disabilities Act (1997), commonly referred to as "IDEA 97". He may have opportunities for socialization that he would not have in a separate classroom. He can be provided with opportunities to extend his abilities. He may be able to benefit from mentoring by his normally achieving peers or from modeling their appropriate behaviors. While he is in the elementary grades, he is less affected internally by peer approval and less vulnerable when comparing himself to his peers. This placement at this stage of his development will most likely have more benefits than drawbacks.

However, the adolescent years bring on a period of social/emotional/personal development that changes the dynamics of the classroom as experienced by a student with learning disabilities. Social comparison becomes increasingly more important as the child attempts to evaluate his self and form a self identity (Harter, 1983).

Several studies have shown that children compare themselves to the students around them, and use that to form opinions about themselves. This is known as the social comparison theory. Coleman (1983) found that higher self-esteem scores were obtained by mildly retarded preadolescents who had been placed in non-inclusion classrooms than

by mildly retarded children who were in regular education classrooms. He theorized that the children's perceptions about themselves were primarily based on their comparisons to others in their immediate social environment.

Another study by Strang, Smith, and Rogers (1978) attempted to manipulate children's comparison groups to determine if self-esteem levels varied by comparison group. They gave students with learning disabilities between the ages of eight and eleven the same test twice, but asked them to use normally achieving students as a reference on one of the tests. The students' perceptions of themselves were significantly worse on the other test when no reference group had been specified. Unfortunately, it was not known what reference group the students did use (Strang, Smith, & Rogers, 1978).

Renick and Harter (1989) hypothesized that as children's cognitive-developmental skills become more sophisticated, they will increasingly use social comparison information as a method for evaluating their skills. They chose 86 children in grades three through eight who had been placed in resource rooms or who attended regular classes and worked for one hour a day with a learning disabilities specialist in a small group. These students were given the Perceived Competence Scale for Children. Results showed that the average score for perceived scholastic competence obtained from the learning disabled students in the regular classroom was lower than the average obtained in the special education classroom, supporting their hypothesis that students with learning disabilities perceive themselves to be more competent academically in the special education classroom. They also found that the scores for the students' comparisons of themselves to their normally achieving peers "systematically decrease with age" (Renick & Harter, 1989). Students using regular classrooms felt less competent as their grade

level increased, but there was no decrease in perceived competence as grade levels increased for students in the resource room. This is noteworthy because they also found that, for all grade levels combined, scholastic competence and global self-worth were significantly correlated. This correlation was significantly higher than the correlation between social acceptance and global self-worth (Renick & Harter, 1989).

Research up to this point has established that most, but not all, students with learning disabilities have social difficulties. When making the educational placement decision for an adolescent with learning disabilities, careful consideration should be given to both the social functioning as well as to the academic needs of the student. It is important that the student's preferences be part of the equation. It may be that he feels most confident and secure in a mixture of settings as opposed to a full inclusion or a separate classroom setting (Vaughn, 2001).

Self- Efficacy and Implications for the Adolescent's Future

The role of the schools is to prepare all students for entry into society and for success in adulthood. This means that the student should be prepared to function independently by making responsible decisions and following up with responsible actions. The ability to function independently in society requires a sense of efficacy, meaning the feeling that one is competent and can determine his own success. Merriam-Webster's Collegiate Dictionary (2000) defines efficacy as "the power to produce an effect". Self-efficacy cannot exist without good self-esteem, which in turn is fostered by perceptions of competency.

Perceptions of efficacy have been found to be lower in adolescents with learning disabilities, particularly for those with mental retardation.

A study of 96 adolescents with learning disabilities by Panagos and DuBois (1999) found that their self-efficacy beliefs were a substantial predictor of career interests and outcome expectations. They found that students with learning disabilities who had low self-efficacy beliefs did not expect to be successful even in jobs that they were obviously well suited to do. This lack of confidence regarding their ability to be capable of completing educational and training requirements prevented them from aspiring to jobs that were higher skilled and better paying. Panagos and DuBois (1999) suggest that the problem is a lack of confidence, not a lack of aptitude. They suggested that if these students receive rewards of personal satisfaction, security, and prestige in a job training/shadowing program, they may receive the rewards that will develop and sustain an interest in a relevant career.

When comparing the perceptions of efficacy and outcome expectations, and in evaluating the locus of control orientations of 282 adolescents with mental retardation to other students with learning disabilities or who were considered at-risk, Wehmeyer (1994) found disheartening results. The students with mental retardation had unrealistic understandings and perceptions of causality, and they also had excessively external global perceptions of control (Wehmeyer, 1994). Reduced cognitive abilities may have caused the inaccurate judgments of situations and abilities.

Pickar and Tori (1986) studied 86 adolescents, 39 of whom were in special education, from a perspective using Erikson's stages of psychosocial development. They found that the learning disabled group obtained significantly lower scores for a sense of industry and

competency, due to years of failing at school tasks. Their results also showed no significant differences between the two groups for overall self-concept, but did show a significant difference on the popularity scale. The adolescents with learning disabilities felt less popular (Pickar & Tori, 1986).

A similar study involved 429 students in four states from ten to nineteen years of age, 93 of whom were mentally retarded, 158 who had other learning disabilities, and 178 who did not receive special education. Palmer and Wehmeyer (1998) examined their expectations for the future, as defined by hopefulness/hopelessness.

They found that students with mental retardation were the least hopeful, followed by students with learning disabilities. Students without disabilities had the highest scores for hopefulness. They concluded that the likely reason for this belief was because persons with mental retardation have limited opportunities to exert control across all environments, and might have fewer skills to gain and exert that control (Palmer & Wehmeyer, 1998). They recommended that a dual-track approach of providing skills training and providing opportunities to experience control and choice would enable these students to become more self-determined in their adult lives.

An interesting study was done by Carrubba (1997) for his doctorate dissertation at Howard University involving adults with mental retardation. He took the position that adult independence in the community was the goal to be achieved by education for students with mental retardation, and sampled adults with mental retardation for their acquisition of independent living skills. He divided them, first by cognitive assessment scores into four groups, and secondly, by their previous educational placement of inclusion or non-inclusion. The subjects were given the Vineland Adaptive Behavior

Scale test. Results showed greater initial independence scores for adults in three out of four cognitive levels from high inclusion settings. However, adults in the two middle cognitive levels from non-inclusion settings showed significantly greater gains in independence skills (Carrubba, 1997).

Studies Comparing Self-Concepts

Numerous studies have been done that have compared the self-concepts of students with learning disabilities to students that were normally achievers. While there seemed to be a general consensus that self-concepts related to the academic domain were lower for students with learning disabilities (Hiebert, Wong, & Hunter, 1982), the literature and the studies are inconsistent with regard to the issue of global self-esteem/general self-worth for these individuals (Chapman, 1988).

A study by Vaughn and Haager (1994) followed 239 students with and without learning disabilities from kindergarten through fifth grade, and found that they did not differ significantly on peer acceptance or self-concept, although there were significant differences in social skills and behavior problems.

A study with similar results was presented by Yeager (1995) in the 1995 conference proceedings of the American Council on Rural Special Education in Las Vegas, Nevada. A midwestern suburban/rural school of 1200 K-12 students tested 93 special education students in their inclusion program using the Piers-Harris Children's Self-Concept Scale. They called their program, which had been started in 1984, "Class-Within-A-Class". The study found that all of the students scored in the normative range for positive self-

concept. It was noted that the majority of the group tested were children with mild to moderate disabilities; there were few students that were mentally retarded or behaviorally disordered.

Sabornie (1994) studied the social-affective characteristics among 76 middle school students with and without learning disabilities and found that while the groups differed significantly on loneliness, integration, victimization, participation, and teacher-rated social competence, they were not significantly different on self-concept.

Five studies were found that presented opposing views; they found lowered self-concepts among students with learning disabilities. Raviv and Stone (1991) found that 49 adolescent students with learning disabilities scored lower on self-image than 49 adolescent normally achieving students. They also found that the severity of the learning disability was not related to self-image, and that later-diagnosed adolescents scored higher than those who had been early-diagnosed, although the authors of this study did not speculate on the reasons for these additional findings.

The development of self-esteem in students with mild mental retardation and normally achieving students was examined in Long's (1997) doctorate dissertation for the University of Missouri. Her analysis of 144 student-completed Behavior Academic Self-Esteem Scales showed that students with mild mental retardation generally had lower self-esteem than their normally achieving peers, with the greatest fluctuation in self-esteem levels in ages nine to fourteen years.

An investigation of the social sensitivity and self-concept of 90 junior high school, high school, and community college students, half of whom had learning disabilities, by Jarvis and Justice (1992) found that students with learning disabilities on all grade levels

were significantly less accurate at interpreting social situations and had significantly lower self-concepts.

In a paper presented at the annual meeting of the American Educational Research Association, Williams (1985) gave the results of four studies examining aspects of the social-emotional development of elementary and secondary students with learning disabilities. Results showed significantly lower self-concepts for the students with learning disabilities (Williams, 1985).

Finally, review of studies on the self-concepts of children with learning disabilities done by Chapman (1998) supported the concept of lowered self-esteem. He noted that while children with learning disabilities appeared to have lower self-concepts, the greatest differences were in academic, rather than general, self-concept.

Similar Studies Comparing Self-Concepts and Placement

Proponents of inclusion education advocate that academic and self-worth concepts of students with learning disabilities are enhanced by integration into mainstream classes. The expected outcomes include improved socialization skills, improved peer relationships with normally achieving students, and better attitudes towards children with disabilities. However, studies that have examined this position have produced mixed results.

Most of the research has been done by comparing students that were in separate classrooms to students who were in regular education classes. However, frequently, educators employ a variety of strategies to address the needs of their students in special

education. Inclusion or non-inclusion placement may have different definitions as it applies to actual practice.

Giordanella (1996) investigated the effects on self-concepts of inclusion for varying amounts of time with varying amounts of in-class support in her doctorate dissertation for Columbia University. The subjects were in grades five through eight and from ten to fourteen years in age. They consisted of 42 males and 11 females enrolled in a suburban middle school in northeastern New Jersey who were racially mixed. They were classified as learning disabled, and exhibited a broad range of perceptual and comprehension processing deficits. All were of average or above average intelligence. The average IQ was 97.7.

The five instructional settings used for evaluation were as follows: 100% pullout, 100% inclusion/support (collaborative in-class support for science, social studies, language arts, and reading), 50% inclusion/support-50% pullout, 25% inclusion/support-25% inclusion/no support- 50% pullout, and 50% inclusion/no support-50% pullout.

The students were given a pre-test/post-test measurement (the 80-item Piers Harris Self-Concept Scale) to determine how they felt about themselves, and the Iowa Test of Basic Skills was given in the spring of 1993 and again in 1994 to measure academic progress. Results showed no significant differences for academic measures between all the groups. When the groups were compared for self-concept measures, the group that was 100% inclusion/support had significantly higher scores for happiness and popularity. Further tests between the group that was 100% pullout and the group that was 100% inclusion/support showed no significant differences for the adjusted mean scores on self-perceptions of behavior, intelligence, physical appearance, and anxiety. However, when

comparing pre-test and post-test for happiness and popularity, the 100% pullout group decreased significantly on popularity, and the 100% inclusion/support group increased significantly in happiness.

This supported the study's hypothesis that "when children with learning disabilities remain in the mainstream with supportive help in all of their classes, they tended to be happier and to feel more popular than when they were placed away from the mainstream" (Giordanella, 1996).

The author of this study noted that it was limited by the small sample of students, by possible influences of the teachers in the collaborative classrooms, and by the roles of the students who were not disabled may have played in influencing the behaviors and academic achievements of the students with learning disabilities.

The study did not include any students with mild or moderate mental retardation. The group that the label of "learning disability" is applied to often includes students with cognitive impairments. Thus, this study did not address the effects of inclusion on self-concept for students who may not be able to interact intellectually or hold a conversation on the same level as their non-disabled peers.

In a contrasting study, Browell (1996) in his doctorate dissertation for the Texas Woman's University found that the global and affect self-concept scores were more positive for students who were learning disabled and in resource (separate) classes than they were for students in inclusion classes. For this study, the classification of inclusion or non-inclusion meant that students had at least two classes outside of their primary placement.

The sample for this study was students in sixth through eighth grade who were learning disabled. There were 30 students who were disabled in inclusion classes, 30 who were disabled in non-inclusion classes, and 30 who were non-disabled in inclusion classes. Half were boys and half were girls. They attended four middle schools in north central Texas. In Texas, the classification of "learning disabled" required that there be a minimum of at least one standard deviation between achievement and expected achievement based on IQ scores. Therefore, many of the students thus classified were below average intelligence and might have been mentally retarded.

He used the 150-item Multidimensional Self-Concept Scale to assess self-concept. This clinical/research instrument assessed a child's self-evaluation in the domains of social, competence, affect, academic, family, and physical and provided a measure of global self-concept. The family and physical scales were not administered in this study, and he cited this as a possible limitation. The average GPA's were recorded from school records. As would be expected, there was a positive relationship between GPA's and academic self-concepts for the non-learning disabled and disabled students in inclusion classes. However, there was a negative correlation for the non-inclusion group, leading Browell to speculate that perhaps it was not perceived as "cool" to earn good grades in the resource room.

He also found that non-learning disabled students in inclusion classes had higher self-concept scores than their learning disabled classmates, as well as for academic self-concept scores. There was no difference in scores related to gender, irregardless of the educational setting.

Browell proposed that these results support social comparison and frame-of-reference processes as reasons why the students scored lower when included with non-disabled peers. Because the learning disabled students had to compare themselves daily with non-disabled peers, their sense of self-worth might have been negatively affected (Browell, 1996).

Limitations of the study included the lack of the experimenter's ability to control some conditions, such as the inability to randomly assign subjects to groups, and "the use of ever-evolving state eligibility criteria for identifying LD (learning disability) and non-LD groups."

A third study by Berman (2000) for his doctorate dissertation for Temple University examined 51 students with learning disabilities in seventh and eighth grade from two urban middle schools. There were 26 children from three non-inclusive classrooms and 25 children from eight inclusive classrooms. Pennsylvania's criteria for diagnosis of a learning disability included assessments of cognition, social-emotional functioning, perceptual abilities, and academic achievement. The students in this study had an average IQ of 83.6. Some of the participants were educable mentally retarded.

The purpose of this study was to determine if the academic and social self-concepts differed significantly between students with learning disabilities in non-inclusive special education classrooms from those who had been receiving in-class support in regular classrooms, and if actual academic achievement differed. Inclusion meant that while the children were in regular education classrooms, a special education teacher was with them for one-third of the day giving specialized instruction. Non-inclusion meant that the children with disabilities were with non-disabled children only for non-academic

activities such as lunch and assemblies. Students were given the 150-item Multidimensional Self-Concept Scale to assess self-concept levels; reading and mathematics were assessed with the Stanford Achievement Test.

Results did not support the hypotheses of the study, as there were not significant differences between the two groups for academic or social self-concept, or for reading and mathematic achievement. Several possible explanations were suggested by Berman. Teachers and classmates "fostered attitudes that contributed to developing similar levels of self-concept" (Berman, 2000). He speculated that high social support, particularly from peers, contributed to a higher self-concept. In this case, contrary to social comparison theory, it appeared that the inclusive students did not use their non-disabled peers for comparison on performance of academic and social abilities. He suggested that the collaborative approach used by the special and regular education teachers helped to determine academic progress for the inclusive group. He concluded that placement decisions should be made individually, not unequivocally, based on the needs of each child.

Limitations included the size of the sample, the low social and economic status of the group, which might have influenced their perceived value of education, and the teachers' elimination of potential participants with behavioral and social difficulties.

Dawson (2000) did a similar study on younger children with learning disabilities for her doctorate dissertation for Temple University. These 43 children were in fourth through sixth grade and from nine to thirteen years of age. All of the children's IQ's were in the average or higher range. The self-esteem measurement used was the 80-item Self-Esteem Index by Brown and Alexander (1990). The children with learning disabilities

were grouped by three placements; self-contained, resource room/pullout, and full inclusion.

The results of this study showed that while there were not significant differences in the variables of global self-esteem or for perception of academic competence, peer popularity, and familial acceptance, there was a significant difference for the perception of personal security. The lowest scores were from the self-contained group. The resource room/pullout group had the highest mean scores on all assessed self-esteem variables (Dawson, 2000). Dawson concludes that her study failed to prove that full inclusion best enhances the self-esteem of students with learning disabilities, since the group that had the highest scores was in outside special education classrooms for 30% of their day.

Limitations included the small sample size and the fact that the subjects were not randomly selected and were from only one school district, raising questions about school climate and culture.

Summary

The possible lowered self-esteem of children categorized with learning disabilities has been the subject of much research; both the questioning of its existence and speculation for the origins. However, little research exists on the self-esteem of the sub-groups within the heterogeneous grouping of "learning disabled."

Two principal influences on lowered self-esteem for these children have been identified: the effects of social skills deficits and academic self-concepts.

It was found that social skills deficits were caused by a lessened ability to appropriately interpret nonverbally expressed emotion, such as facial expressions or unspoken social cues (Jackson, et al., 1987). Lack of this competence can exacerbate achievement problems (LaGreca & Stone, 1990) and carries a heightened risk for school dropout, psychiatric dysfunction, juvenile delinquency, and criminal behavior (Parker & Asher, 1987).

Peers tended to view children with learning disabilities as less popular and having less social status, and they were often devalued and belittled by significant others (Krutilla & Benson, 1990). Seven out of ten children with learning disabilities would not be considered or chosen as friends by their normally achieving peers (Kavale & Forness, 1996). Other studies show that many of these children respond by adopting a differential, submissive stance (Bryan & Pearl, 1982), and they often have a major problem with reticence (Nitcavic & Aitken, 1988).

Numerous studies showed a positive correlation between academic achievement and self-concept (Avazian & Wood, 1987; Renick, 1985), finding that poor academic achievement preceded poor self-concept (Filozof et al., 1998).

It has been found that parents of children with learning disabilities can contribute, albeit unknowingly, to their child's lowered sense of self-worth by communicating unreasonably low or overly general expectations (McLoughlin et al., 1987, Stone 1997; Tollison et al., 1987).

When a child with learning disabilities is included in a regular education classroom, his peers for comparison purposes can become the normally achieving children. Since the other children may be perceived as more successful academically, the child with a

learning disability may devalue his own performance, contributing to lowered self-concepts (Coleman, 1983). Social comparison becomes increasingly more important as the child enters adolescence and begins to form a self identity (Harter, 1983).

Numerous studies have found lower perceptions of self-efficacy in adolescents with learning disabilities (Panagos & DuBois, 1999; Pickar & Tori, 1986), particularly those with mental retardation (Palmer & Wehmeyer, 1998; Wehmeyer, 1994). These beliefs can prevent them from aspiring to better jobs that they are obviously well-suited to do, and they tend to end up with low-paying, low-skilled, part-time positions (Panagos & DuBois, 1999).

Three studies encompassing kindergarten through twelfth grade were reviewed that found that students with learning disabilities did not differ significantly for self-concept when compared to normally achieving students. However, only a few students with mental retardation were included in the total of 408 children with learning disabilities for all three studies. These studies did not use educational placement as a variable.

In contrast to these findings, three studies, a four-study review, and a literature review were found that concluded that lower self-concepts exist for children with learning disabilities when compared to children without learning disabilities.

Finally, four studies were reviewed in depth because they were similar to the study that will be done and examined in this thesis. All of these studies involved adolescents with learning disabilities and the effect of educational placement on self-esteem, although one study included fourth and fifth graders, and another included fifth graders. Adolescence is typically thought to begin around sixth grade.

The results of these four studies were not consistent, and did not conclusively support the premise that the self-concepts of adolescents with learning disabilities are lower or higher depending on the amount of inclusion in regular education classrooms.

In conclusion, this review of literature has found that possible causes of lowered self-esteem in children with learning disabilities are social skills deficits, low academic self-concepts, and sometimes, unreasonably low parental expectations. Inclusion and subsequent social comparison to peers who are not learning disabled may also contribute. A side effect of poor self-esteem is a lack of a perception of efficacy, which helps to determine the child's success in future endeavors.

However, studies have not clearly established that these children's global self-concepts are, indeed, lower than those of normally achieving children, or that educational placement is instrumental in affecting a child's self-esteem.

A consensus on the very construct definition of "self-esteem" is difficult to reach, and this is listed as a limitation in numerous studies.

A study that compares self-esteem levels among adolescents with learning disabilities or low cognitive abilities as found in mental retardation, and their educational placements of inclusion or non-inclusion has not been found by this researcher. To investigate the research question of whether self-esteem levels are affected by placement, and to examine the hypothesis that cognitive development plays a crucial role in the perceptions of self-worth among adolescents with learning disabilities, a study was conducted as explained in Chapter III.

Chapter III: Design of the Study

Sample

The sample for this study was adolescents with learning disabilities that included mental retardation from various special education classrooms. The sample was delineated by their educational setting of either inclusion or non-inclusion with normally achieving peers. Adolescence, for the purposes of this study, was defined by the ages of 13 to 21 years. Of the 31 adolescents who were tested, 22 were males and nine were females. Six adolescents with mental retardation attended school in non-inclusive settings, 12 adolescents with mental retardation attended school in inclusive settings, and 13 adolescents with learning disabilities, but not mental retardation, attended school in inclusive settings. All went to schools affiliated with New Jersey public schools and lived in southern New Jersey in suburban settings. The majority of the inclusive students were from lower or middle class social economic classes, but all of the non-inclusive students were middle class. While many adolescents in the sample had other learning and/or physical disabilities along with mild or moderate retardation, none were severely physically or mentally retarded.

Measures

The measure selected to evaluate overall self-concept as defined by self-esteem levels was James Battle's Culture Free Self-Esteem Inventories-Third Edition (CFSEI-3), which was published in 2002. It was a self-report, norm-referenced instrument with four principal uses, one of which was as a research tool for investigators who wished to study self-esteem using standardized instruments.

The test was available in three age-appropriate forms. The form used in this study was the "Adolescent Form", designed for students of the ages of 13 through 18 years, 11 months. It had 67 items that were grouped into five subscales of academic, general, home, social, and personal. The subscale standard forms were summed to create a Global Self-Esteem Quotient (GSEQ), which represented a person's performance on the whole inventory, and a defensiveness score, which was actually a "lie" scale. The GSEQ was a standard score with a mean of 100 and a standard deviation of 15.

This measure was selected, in part, for its ease of use with the sample population. It could be done individually or in groups, written or spoken, and had been recommended by its author for use with students with mental retardation. The test could be administered in approximately 20 minutes by a teacher or other responsible adult; consequently, the researcher could remain uninformed as to the students' identities. This was a key factor in obtaining permission from school authorities in order to gain access to the students.

Prior test procedures had established internal consistency reliability for this instrument. The average coefficients for the GSEQ, calculated using Cronbach's

coefficient alpha method, exceeded or rounded up to .80, which is indicative of good reliability for content sampling. A test-retest correlation method was used to check time sampling error, and the resulting coefficients were consistently large enough to demonstrate good test-retest reliability, ranging from .78 to .98 for the adolescent form. Finally, coefficient alphas ranging from .76 to .98 for the selected subgroup of learning disabled adolescents established reliability for use with these students. The reliability for the selected sample in this study was estimated to be in accordance with the overall good reliability of the instrument. The sample's characteristics of age and ability were similar with characteristics that described the normative population on whom the test had been referenced.

However, the following conditions may have existed to some degree that would have placed limitations on the study.

The test was administered by either a teacher in a group setting at school, or by a parent in the student's home. The test instructions were extremely simple and very brief, and there was little margin for differences in interpretation of the procedures. However, it should be noted that the same instructor did not explain the procedures to all of the students.

In those cases where the test was given at home, there was always the possibility that a student felt influenced by the presence of his parent nearby when responding to the test questions, and this might have affected his responses to some degree. An additional variable may have been the varying time of day that the test was administered when given at the student's home. Tests given at the schools were always done in the morning, but tests given at home were at the parent's discretion. There might have been incidences

where the student's frame of mind was affected by the time of day and subsequent energy level, distractions, etc.

Test validity was assessed for content validity, criterion-related validity, and construct validity, and results showed that the test was valid. Conventional item analysis using the Pearson correlation index resulted in discrimination coefficients that met or exceeded the recommended .35 value. The logistic regression procedure was used to conclude that the inventory of test items was nonbiased in regard to gender, race, and ethnicity.

The test was relevant and incorporated the current thinking of today's theorists and clinicians regarding self-esteem. Since this was the third edition of the Culture Free Self-Esteem Inventories that was initially published in 1981, the test had been systematically re-evaluated through two later editions and subsequently improved to reflect the concerns of cultural fairness and test bias. Normative data for this edition had been collected from the summer of 1998 through the fall of 1999. Characteristics of the normative sample approximated those reported for the entire school-age population in the Statistical Abstract of the United States (U.S. Bureau of the Census, 1990).

The independent variables in the study were the educational setting of the student of either inclusion or non-inclusion, the designation of mentally retarded or learning disabled, and the student's gender. The dependent variables were the individual scores obtained from each student on the Culture-Free Self-Esteem Inventories-Third Edition for Global Self-Esteem, Personal Self-Esteem, and Social Self-Esteem, which represented various levels for these types of self-esteem.

Design

This study's design was comparative in nature. The samples that were described and then compared were male or female adolescents with learning disabilities or mild or moderate mental retardation who were being educated in the company of their non-disabled peers, and those who were separated from their non-disabled peers.

Scores representing global levels of self-esteem were the variables that were used in determining which of the groups had the higher global self-esteem. A standardized mean score was derived for each group from the individual scores, and then compared. It was predicted that the group of adolescents who were educated separately from their non-disabled peers would have the higher mean score for global self-esteem.

Two subscales for personal self-esteem and social self-esteem were examined for differences between the two groups for comparative purposes. It was predicted that there would be higher subscale scores for the group that was in a non-inclusive educational setting.

Testable Hypothesis

The null hypothesis was that there would be no difference between the mean scores for global, personal, and social self-esteem for male or female adolescents with learning disabilities or mental retardation and who were in inclusive classrooms and the mean score for self-esteem for adolescents with mental retardation who were are in non-

inclusive classrooms. The alternate hypothesis was that the group who were in non-inclusive classrooms would have higher mean scores for self-esteem.

Analysis

The models used to test the hypothesis were a repeated measures one-way analysis of variance (ANOVA), and a two-way analysis of variance (ANOVA) between subjects. The independent variables were the educational setting, gender, and classification as mentally retarded or learning-disabled. The dependent variable was the individual scores on the self-esteem measurement. The mean for each group was compared in this test. This was an appropriate test for this hypothesis since different groups of people were compared on several levels.

Additionally, a two way analysis of variance (ANOVA) between subjects was used within the comparison groups to determine differences among two self-esteem sub-scales for personal and social self-esteem.

Summary

In this study, 31 adolescents with learning disabilities or mild or moderate mental retardation were categorized by two types of educational settings of either inclusion or non-inclusion with normally achieving peers. They were given a norm-referenced, self-report test which resulted in a Global Self-Esteem Quotient and two subtest scores for Personal and Social Self-Esteem.

After permission had been obtained from the appropriate school boards, the testing procedures and the forms were explained to the teachers so that they could administer the test to the students at a later time. A brief explanation and permission slip was sent home with the students. In the case of those students who were identified through a teen mentoring program, a letter was sent to the parents asking for their permission and cooperation by administering the test at home. All of the students were then asked to complete a 67-item self-report measure to determine their individual level of self-esteem, which was represented by a numerical score. The instrument used was the Culture-Free Self-Esteem Inventories-Third Edition, a test that had good reliability and validity, and had been recommended for use with adolescents with mental retardation. A group mean score for global self-esteem was obtained for each group, and the groups were compared by utilizing a one-way ANOVA and a two-way ANOVA. Additionally, scores obtained for two subscales for personal and global self-esteem were analyzed using a two way ANOVA between subjects to see if differences existed between the groups on the subscales.

The null hypothesis was that there would be no difference in the various self-esteem levels between the groups. The alternate hypothesis was that the group who was in a non-inclusive educational setting would report higher mean scores for self-esteem levels.

This was a comparative study that described the levels of global self-esteem for each group and compared the scores between the groups. The independent variables were the educational setting, gender, and the classification of mental retardation or learning-disabled, and the dependent variable was the test scores. The study also compared scores between the groups for two subscales for personal and social self-esteem.

Chapter IV: Analysis of Results

In the following chapter, the results were analyzed and summarized from the gathered data. The results were interpreted to accept or reject the hypothesis.

Organization of Analysis

Although data was collected from a total of 54 adolescents, three tests provided incomplete information about the test-taker, five did not fit the age qualifications for this study, and fifteen were disqualified because their scores might have had potentially diminished validity as a result of the high defensiveness factor score that each evidenced. This factor score is sometimes called the "lie" factor, and may mean that their responses did not represent the individual's true self-esteem levels.

The remaining 31 adolescents were first were separated by classroom setting and classification (labeled as the first independent variable "SETCLASS") of (#1) non-inclusion/mentally retarded (N=6), (#2) inclusive/mentally retarded (N=12), or (#3) inclusive/learning-disabled (N=13). The second independent variable (labeled "@GROUP") was defined by a designation of (#1) non-inclusive/mentally- retarded/male (N=6), (#2) inclusive/mentally retarded/male (N=7), (#3) inclusive/mentally retarded/female (N=5), (#4) inclusive/learning disabled male (N=9), or (#5) inclusive/learning-disabled female (N=4). The third, and last, independent variable was

the gender designation (labeled "SEX") of male (N=22) or female (N=9). The dependent variable, each individual's scores for global, social, and personal self-esteem, was then loaded into the model.

A repeated measures one-way analysis of variance (ANOVA) was done to compare global, social, and personal self-esteem levels between the three classroom setting/mentally retarded or learning-disabled (SETCLASS) groups. A univariate ANOVA between subjects was done to further delineate by gender (SEX), analyzing the global self-esteem scores. Additional tests were performed to investigate relationships among the different groups. A T-test was done to compare social self-esteem between individuals with mental retardation who were in non-inclusion or inclusive settings. A non-parametric test, the Kruskal-Wallis Test, was done to explore differences for global, personal, and global self-esteem between all 31 adolescents as separated into the five groups (@GROUP) for classroom setting, disability, and gender. Finally, descriptive statistics, graphs, histograms, and box plots were derived from the raw data to obtain overall profiles of the various ranges and levels of self-esteem as reported by the various groups.

Restatement of Hypothesis

The null hypothesis was that there will be no difference between the mean scores for global, personal, or social self-esteem for either male or female adolescents with learning disabilities or mental retardation, all of whom were in inclusive classrooms, and the mean scores for those adolescents who were in non-inclusive classrooms. The alternate

hypothesis was that the individuals who were in non-inclusive classrooms would have higher mean scores for self-esteem.

Interpretation of Results

No statistically significant differences were found between the groups in this study's sample for global, personal, or social self-esteem. The following tests were performed on the gathered data using specific independent variable combinations. In the one-way ANOVA, the significance between groups when analyzed by classroom setting, disability and gender were all non-significant. A within group analysis of global self-esteem or social self-esteem scores was not significant when comparing the various combinations for classroom setting and disability, gender, or for correlation of classroom setting/disability with gender. The T-test failed to yield any significance for equality of variances and significance (2-tailed) or for equality of means when comparing the social self-esteem scores for adolescents in inclusive classroom who were either mentally retarded or learning-disabled.

Descriptive statistics for the entire sample of 31 adolescents were presented in Table 4.1 (p. 47). The range for the global scores was extensive at 48 units. The ranges for the two subtests were also extreme, at 11 units for the social scores, and at 10 units for the personal scores. These large variation in scores caused large standard deviations.

Table 4.1 Score descriptions for the study's sample

SELF-ESTEEM	MINIMUM	MAXIMUM	MEAN	STAND. DEV.
GLOBAL	70.00	108.00	87.2903	10.2801
SOCIAL	2.00	13.00	7.4839	3.1398
PERSONAL	3.00	13.00	7.5161	2.8737

Table 4.2 Test manufacturer's descriptive ratings for standard scores

SCORES	DESCRIPTIVE RATINGS	QUOTIENTS	% INCLUDED
17 – 20	Very High Self-Esteem	>130	2.34
15 – 16	High Self-Esteem	121 – 130	6.87
13 – 14	Above Average Self-Esteem	111 – 120	16.12
8 – 12	Average Self-Esteem	90 – 110	49.51
6 – 7	Below Average Self-Esteem	80 – 89	16.12
4 – 5	Low Self-Esteem	70 – 79	6.87
1 – 3	Very Low Self-Esteem	< 70	2.34

Global, social, and personal self-esteem scores for all 31 adolescents ranged from very low to above average, with the mean for all scores being below average. The test manufacturer's score interpretations for global self-esteem, social self-esteem, and personal self-esteem, when compared to the normative population, were listed in Table 4.2 (above).

Non-parametric analysis using the Kruskal-Wallis test yielded rankings for the means for each of the five groups labeled as "@GROUP" for global, personal, and social self-esteem. Although none of the results were statistically significant, there were large variations within the five groups for mean rank. These variations were shown in Table 4.3 (below). The highest mean rank for global self-esteem scores were for groups two and five, who were inclusive males with mental retardation and inclusive females with learning disabilities, with a mean rank of 19.14 and 19.13, respectively. The lowest mean rank at 11.20 was for group three, who were inclusive females with mental retardation. The lowest mean rank for personal self-esteem was for group two, who were inclusive males with mental retardation at 11.69, while the rest of the groups had similar rankings ranging between 16.00 and 18.75. For social self-esteem scores, the highest mean rank of 21.00 was reported by group two, inclusive males with mental retardation. The lowest mean rank of 10.83 was reported by group one, non-inclusive males with mental retardation.

Table 4.3 Mean rankings from the Kruskal-Wallis (non-parametric) analysis

@GROUP	N	Global	Personal	Social
1	6	17.00	16.00	10.83
2	7	19.14	16.71	21.00
3	5	11.20	11.60	13.10
4	9	14.17	16.67	15.94
5	4	19.13	18.75	18.75
Total	31			

Statements of Significance

This study did not find any statistical significance among the sample population of 31 adolescents for global, personal, or social self-esteem. The groups were defined by classroom setting of inclusion or non-inclusion, disability of mental retardation or learning-disabled, and by gender.

Summary

The conclusion of this study was that statistically significant differences were not found among the groups for global, social, and personal self-esteem levels. The null hypothesis that there would be no differences was accepted, and the alternate hypothesis that there would be significantly higher levels of self-esteem for adolescents who were in non-inclusive classrooms was rejected.

The global self-esteem quotient for the 31 adolescents averaged a standard score of 87.2903, which fell into the category that was classified as "below average" when compared to the normative population. The range was extensive, from 70.0 (low self-esteem) to 108.0 (average self-esteem). The average scores for both the social and personal sub-tests for the 31 adolescents fell in the "below average" classification, at 7.4839 and 7.5161 (test manufacturer's raw scores), respectively. Ranges in these sub-test categories were extremely varied; ranging from 2.00 (very low self-esteem) to 13.00 (above average self-esteem).

Variations were evident within the groups. The lowest average global quotient came from the inclusive group of females with mental retardation. The highest average global quotient came from two groups; one of inclusive females with learning disabilities and one of inclusive males with mental retardation. The lowest average social self-esteem score was found in the non-inclusive group of males with mental retardation, and the highest average was from the inclusive group of males with mental retardation. Finally, the lowest average personal self-esteem level was found in the inclusive group of females with mental retardation.

The implications of these results for the theory in this study will be discussed in Chapter V.

Chapter V: Summary and Conclusions

Students with learning disabilities and mental retardation frequently experience social, emotional, and/or personal difficulties that can be quite serious and highly resistant to treatment. As a result of their cognitive disabilities and/or learning disabilities, they may have difficulty understanding social cues, and may misinterpret the subtleties of interpersonal communication. This can result in ineffective interactions with peers, both those with disabilities and those who are not disabled. Adolescents are particularly vulnerable to low self-esteem because successful peer interactions are second in importance only to physical appearance for an overall sense of positive self-worth (Arnett, 2001).

Applying Jean Piaget's widely accepted theories of cognitive development for children and adolescents to the individual with cognitive delays raised the issue of the effects of differing stages or degrees of maturation on peer relationships. Most children move from the concrete operations stage to the formal operations stage around age eleven. Their ways of thinking become more complex. They become capable of thinking logically and abstractly, are able to form hypotheses about situations and dilemmas, and can develop strong idealism. Many adolescents in special education have not yet achieved this level of maturity, but are nevertheless, as a result of inclusion, thrown into close proximity with peers that are more cognitively and socially mature.

Two principal influences on lowered self-esteem for children with disabilities have been identified; the effects of social skills deficits and academic self-concepts. Approximately 75% of children with learning disabilities exhibit social skills deficits (Kavale & Forness, 1996). The effects of these deficits become apparent when studies are done on peer attitudes and acceptance. Peers tended to view these children as less popular and having less social status. They were often devalued and belittled by significant others, who might have been peers, teachers/administrators, and sometimes parents (Krutilla & Benson, 1990).

Research has shown that academic and various levels of self-esteem are intertwined (Avazian & Wood, 1987; Filozof et al., 1998; Renick, 1985). A student with a learning disability that affects his academic performance is especially vulnerable to the self-perception that he is not as successful compared to other students.

Additionally, sometimes parents contribute, albeit unknowingly, to their child's lowered sense of self-esteem by communicating unreasonably low or overly general expectations. Several studies have shown that parents of children with learning disabilities frequently underestimate their child's abilities (McLoughlin et al., 1987; Stone, 1997; Tolison et al., 1987).

Social comparison may be used by the child with disabilities. His peers may be normally achieving children, which can cause him to devalue his own performance.

Perceptions of self-efficacy are an important determinant of later success and independence in society. Self-efficacy cannot exist without good self-esteem. Numerous studies have found lower perceptions of self-efficacy in adolescents with learning

disabilities (Panagos & DuBois, 1999; Pickar & Tori, 1986), particularly those with mental retardation (Palmer & Wehmeyer, 1998).

Controversy surrounds the question of whether children with learning disabilities actually do have lower self-concepts compared to normally achieving children. Literature and studies are inconsistent. Three studies were examined that did not find significant differences; three studies, a four-study review, and a literature review were found that concluded that lower self-concepts did exist for children with learning disabilities. None of these studies involved a sample population that included both variables of adolescents who were in either inclusive or non-inclusive educational settings, and who had either learning disabilities or mental retardation.

This study involved 31 adolescents with learning disabilities or mild/moderate mental retardation. They were administered the Culture Free Self-Esteem Inventories-Third Edition either at home by a parent or in school by a teacher. The students were further categorized by inclusive or non-inclusive educational settings, and gender. A group mean score was obtained for each of five groups for an overall global self-esteem quotient, and for the sub-tests of social and personal self-esteem levels.

The null hypothesis was that there would be no differences between the groups for global, social, and personal self-esteem levels. The alternate hypothesis was that the group who was in a non-inclusive setting would have higher levels of self-esteem.

The data was analyzed by using a one-way ANOVA, a two-way ANOVA, a T-test, and non-parametrically by the Kruskal-Wallis test. No statistically significant differences existed between the groups for any of the levels of global, social, or personal self-esteem. The null hypothesis was accepted, and the alternate hypothesis was rejected.

Finally, descriptive statistics were obtained. It was found that the group mean score for all three types of self-esteem levels were below average, and that the range for each of the three levels was extensive, varying from "very low" to "above average". The sample's mean standard score for the global self-esteem quotient was 87.2903, which is "below average" when compared to the normative population. Variations existed among the groups. For global self-esteem, the highest mean ranking was reported for inclusive males with mental retardation and inclusive females with learning disabilities. The lowest global mean ranking came from inclusive females with mental retardation. The lowest social self-esteem mean ranking was for non-inclusive males with mental retardation; conversely, the highest social self-esteem mean ranking was found for non-inclusive males with mental retardation. Finally, the lowest personal self-esteem mean ranking was reported by inclusive females with mental retardation, while the other four groups were similar as well as higher.

Conclusions

There were no statistically significant differences between the groups listed in Table 5.1 (p. 55) for the global self-esteem quotient, or for social and personal self-esteem levels. The mean standard score for all 31 adolescents was "below average" at 87.2903, and "below average" for both social and personal self-esteem levels. The mean scores for the whole group for all three types of self-esteem were ranked at the 19^{th} percentile.

Table 5.1 Mean scores for each group for global, social and personal self-esteem

@GROUP	N	Global	Personal	Social
1) non/MR/m	6	88.67	7.67	5.67
2) inc/MR/m	7	91.00	8.00	9.14
3) inc/MR/f	5	82.00	6.00	6.80
4) inc/LD/m	9	85.11	7.67	7.56
5) inc/LD/f	4	90.25	8.00	8.00
Mean		87.29	7.52	7.48

non=non-inclusive classroom, inc=inclusive classroom,

MR=mentally retarded, LD=learning disabled, m=male, f=female

Discussion of Results

The findings of this study did not confirm the alternate hypothesis, and the null hypothesis that there would be no significant differences between the groups in the sample for levels of self-esteem was accepted. It was important, however, to consider the characteristics of the study's sample.

The sample size of 31 individuals was a limiting factor. Although the initial sample had 54 adolescents, 15 had to be disqualified because of a high defensiveness factor score that may have compromised the validity of the study if they had been included. Of the 15 that were excluded, 13 were mentally retarded, and two were learning disabled. For those 13 adolescents who were mentally retarded, this translated to 24% of the entire original

sample and to 42 % for those with mental retardation in the original sample. (For the record, ten were male and three were female. It is not suggested that this is anything other than coincidence.) This unintentional finding led to the interesting possibility that this population may tend to use denial as a defense mechanism regarding issues that they knew to be sensitive, such as honesty or morality. For example, questions that a negative answer was scored as a defensiveness factor included "do you always tell the truth?", "do you ever get angry?", and "do you like everyone that you know?"

Because the sample size was small, the categorization into five separate groups caused small numbers of individuals within each group; perhaps too small to make generalizations and to have significantly different comparisons. For example, there were only five adolescents in the group labeled as "inclusive/mentally retarded/female".

Representation in the sample population did not include any non-inclusive females with mental retardation. Access to this type of student had proven to be too problematic at the time that this study was undertaken.

The findings of this study did indicate that adolescents with learning disabilities or mental retardation have a lowered sense of self-esteem when compared to the normative population. This finding applied to both genders, in both educational settings, for the global self-esteem quotient and for levels of personal and social self-esteem. Research findings have been contradictory regarding self-esteem levels for this population.

Descriptive statistics yielded some observations that, while not statistically significant with this sample in this study, are worth noting. Not surprisingly, the social self-esteem mean score was lowest for the group who was in a non-inclusive educational setting (non/MR/m), and highest for the same group (inc/MR/m) who was in an inclusive

educational setting. The overall profile of the groups as listed in Table 5.1 shows a somewhat lower profile for inclusive females with mental retardation (inc/MR/f) compared to males with the same characteristics (inc/MR/m). Conversely, the opposite was true for inclusive females with learning disabilities (inc/LD/f); the females had a slightly higher profile than the males (inc/LD/m). However, because the sample size was so limited, these observations merely raised questions for further research.

Implications for Further Research

Future endeavors regarding evaluation of self-esteem levels for inclusive or non-inclusive adolescents in special education should include a larger and more fully diverse representation for both gender and educational setting classification than what was available for this study.

Further research is needed that investigates the gender differences among adolescents with learning disabilities and among adolescents with mental retardation for levels of self-esteem. Differences in social cognitive processing and skills or deficits as they relate to the disability of mental retardation or "learning disability" may be applicable to the findings that such a study would unearth.

Additionally, the unintentional finding that adolescents with mental retardation who completed the test measure for this study had a 42% disqualification rate because of obtaining unacceptably high "defensiveness factor" scores is intriguing. Future research might reveal the possible role of denial as a defense mechanism for compensating for

social skills deficits or as an obstacle in overcoming social skills deficits for these individuals.

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