This study investigated the correlation between self-concept and reading achievement level in 20 reading-disabled students (mean age 10.3 years, mean grade level 4.75), having average intelligence. Self-concept was assessed using the Piers-Harris Children's Self-Concept Scale and reading achievement level by the Tennessee Comprehensive Assessment Program. A low positive (but not statistically significant) correlation was found between the total self-concept scores and the total reading achievement scores. A literature review examined the development of self-concept in the child and existing research on the relationship between academic achievement and self-concept for children with learning disabilities. Further studies with a larger sample size and more randomization are recommended. (Contains 58 references.) (DB)
Relationship between Self-Concept and Reading Achievement Level of Reading Disabled Children Having an Average Level of Intelligence.

Barbara N. Young
Abstract

The purpose of this study was to investigate the correlation between self-concept and reading achievement level in reading disabled students having average intelligence. Twenty subjects, having a mean age of 10.3 and mean grade level of 4.75, were selected for participation. Using the Pearson r correlation procedure, it was found that a low positive correlation existed between the total self-concept scores measured on the Piers-Harris Children’s Self-Concept Scale and the total reading achievement scores as measured on the Tennessee Comprehensive Assessment Program (r=.2614, p<.05). It was concluded that the correlation between self-concept and reading achievement was not significant, although the low positive linear relationship did suggest that further studies, with a larger sample size and more randomization, be initiated.
Introduction

What children believe about themselves as learners and ultimately as persons can have a profound effect upon their lives. All children need to feel accepted, capable, and competent. If these needs are not met, emotional and behavioral problems may develop. Learning disabled children are especially vulnerable in this respect. Repeated failures and negative feedback from others frequently lead to a sense of low self-worth, and students with learning problems often enter a self-defeating cycle in which school failure and self-doubt influence each other (Thompson, 1986). Self-worth, or self-concept, is defined as a relatively stable set of self-attitudes reflecting both a description and an evaluation of one's own behavior and attributes, and it is interchangeable with the terms of self-esteem and self-regard. This phenomenological view of "self-concept" may be either positive or negative (Wylie, 1974).

Teachers and other students frequently equate school achievement with social acceptability. Educators frequently judge students with learning disabilities as less capable, academically and socially, than nondisabled students even in areas in which they are doing quite well (Schunk, 1989). Although learning disabled students may have IQ scores ranging from 90-109 and fall within the "average" range of intelligence, as assessed on a measuring instrument such as the WISC-R (Searls, 1985), they are still classified as "disabled" readers in light of the academic reality that they are reading one or more grade levels below placement as assessed on measuring instruments such
as the Tennessee Comprehensive Assessment Program (Gentile and McMillan, 1987). The unfortunate consequence of this self-defeating cycle and low sense of self-worth is apparent in the finding that clinical depression and suicide are six times greater among the learning disabled than is found in the general population (Forness and Sinclair, 1990). Since accuracy of self-estimate in the middle-childhood and early adolescent years seems to be a function of teacher appraisal (Gordon & Wood, 1963; Sears & Sherman, 1964), it follows that if the learning disabled are to flourish in an academic environment, educators need to be more aware of the characteristics of these children and the nature of their educational as well as social and emotional needs (Athey, 1985; Glazer and Fantauzzo, 1989; and Spache, 1976).

Although the academic environment exerts a significant influence on a child’s self-esteem, it is not the only determinant. Parents are equally important. A study at Duke University found that many parents of the learning disabled did not have appropriate expectations regarding either the behavior or the capabilities of their child. Such unrealistic expectations only increase stress and feelings of frustration and tension in the learner (Thompson, 1986).

Experts estimate that 6 to 10 percent of the school-aged population in the U.S. is learning disabled (Lavoie, 1989). Translated to Rutherford County’s approximately 19,500 and Murfreesboro City Schools’ 4,498 students, research done on the concept of self-esteem and its relationship to the learning disabled population in any discipline area would have the
potential to effect 1,440 students, their parents, and their educators. If, as a result of research into this area, awareness of effective ways to foster a positive environment, both at home and at school, could be found, learning disabled individuals would be better able to grow and to learn. Any increased feelings of self-worth in the individual and understanding on the part of parents and teachers could have a mediating influence on the behavior of these children. Enhanced self-concept leads to improved coping mechanisms thus reducing the incidence of school drop-out, social/emotional maladjustment, and later economic dependency among this population (Swanson, 1990).

Statement of the Problem

The problem to be investigated in this study was the correlation between "self-concept" as previously defined and reading achievement level of reading disabled students with average intelligence.

Review of Related Literature

The application of psychoanalytic thinking to a school situation is not a new idea; Freud recommended that education make use of the findings of psychoanalysis (1941). The importance attached to early experience grows out of the psychoanalytic tradition, the field work of behavioral biologists, and longitudinal studies such as those of Bloom (1964) and Kagan and Moss (1962). However, even these studies, as well as other longitudinal efforts, suggest that change is also a characteristic of development over time. There are changes in specific behavior appropriate to internal changes and
external demands (Emmerich, 1968). Nor is it a new idea that emotional difficulties and learning disabilities, specifically reading disabilities, are linked together. Phyllis Blanchard, in 1936, found that reading disability often arises from the same source of emotional difficulty in emotional development, and in the same manner as the accompanying personality or behavior problems.

The self-concept emerges from the life experiences of the individual and has its beginnings in the transactions between the family and the culture and the child’s body. The interpersonal relations between parents and child are significant in developing concepts of self and worth in the child. For example, parents with inappropriate, unrealistic expectations regarding either the behavior or the capabilities of their child seem to be positively related to children with the lowest self-esteem (Rosenberg, 1963; Thompson, 1986). Thus self-concept grows out of a process of evaluation by the child and from the reflected appraisals of significant others. Self-estimate also seems to become a function of teacher appraisal (Gordon & Wood, 1963; Sears & Sherman, 1964), as well as of previous experience with reality. As a result, children’s self-concept not only is related to family background but also is modified by the school situation. A broad spectrum of research has been done in the specific area of reading disability and emotional difficulties by investigators who have sought to understand the role of emotional factors both as a cause and result of reading disability (Ephron, 1953).
More recent studies have been done that indicate that students with learning disabilities and poor academic achievement have been found to have lower self-concepts and to report significantly poorer self-esteem, academic adjustment, and personal-emotional adjustment than do non-learning disabled students (Campbell & Werry, 1986; Ledingham & Schwartzman, 1984; Quay & Peterson, 1987). Additional studies further suggest that these problems with low self-esteem may continue into adulthood (Buchanan & Wolf, 1986; Cooper, 1985; Hoffman et al., 1987; Neault, 1985; Saracoglu et al., 1989). Furthermore, within learning disabled groups themselves, disabled students with higher achievement and average IQ scores report lower overall self-worth than do learning disabled students having more academic deficiencies and lower IQ scores (La Greca et al., 1981, 1987, 1988, 1979, 1981, 1988, 1988). Although the reason for this pattern is not clear, it is quite possible that the average IQ, learning disabled students are more acutely aware of their social and academic deficiencies than the other learning disabled students, and therefore more likely to evaluate themselves negatively. Further research that looks within the learning disabled population, in addition to research involving self-concept and reading disability correlation, would help to elucidate this issue.
In addition, recent studies have shown that learning disabled children and their parents perceive their family environment as less supportive as compared with nondisabled control groups. Depression was also a factor considered in these studies, and it was found to be more prevalent in the learning disabled family environments which were also perceived as more stressful. Specifically, these parents viewed their families as having lower levels of interpersonal relationships than did the control groups (Barkley, 1981; Biederman, Munir, & Knee, 1986; Biederman, Munir, Knee, Habelow, et al., 1986; Brown and Pacini, 1989; Minde, Weiss, & Mendelson, 1972; Hartsough and Lambert, 1982).

As noted, self-perception of children with learning disabilities and perception of these children by significant others such as parents and educators is of primary significance in the field of education. Although evidence overwhelmingly suggests that children with learning disabilities have more negative self-concepts than their nondisabled classmates (Bruininks, 1978; Bryan & Pearl, 1979; Hoyle & Serafica, 1987; Rogers & Saklofske, 1985; Sheare, 1978), a few studies have not found LD students to differ from NLD youngsters in this regard (Beck, Roblee, & Hanson, 1981; Silverman & Zigmond, 1983). The advent of self-concept measures that assess domain-specific areas of self-perceptions (Piers, 1984) has enabled a more precise understanding of the areas in which LD youngsters display negative self-perceptions. In particular, recent findings have noted that LD youngsters perceive their social, academic, and/or
general self-esteem to be lower than nondisabled comparison youth (Gregory, Shanahan, & Walberg, 1985; Hoyle & Serafica, 1987; Morrison, 1985; Rogers & Saklosfske, 1985; Sobol, Earn, Bennett, & Humphries, 1983).

As a result, more study is needed to substantiate and further clarify the connection between lower self-esteem and learning disabilities such as exist in the academic area of reading. Further research as such would enable alternative methods to be developed to equip parents and educators to better deal with the phenomena of low self-worth exhibited by disabled learners who might, or might not, have average intelligence. In turn, any method that could foster increased feelings of self-worth in these individuals, or more understanding on the part of parents and educators, could have a mediating influence on the behavior of the learning disabled student thus reducing the incidence of school-drop-out, social/emotional maladjustment, and later economic dependency among this population (Swanson, 1990).

**Statement of the Hypothesis**

Research evidence suggests that there is a significant correlation between feelings of low self-worth and learning disabilities. The disabled learner is viewed by himself, his parents, and his educators in a less positive manner than are his nondisabled counterparts (Thompson, 1986; Schunk, 1989). Furthermore, within learning disabled groups themselves, disabled students with average IQ scores report lower overall self-worth than do learning disabled students having lower IQ scores (La Greca, et al., 1981, 1987, 1988, 1979, 1981, 1988, 1988). It
seems probable that this correlation will also exist in the area of reading achievement level and self-esteem assessment by the individual reading disabled learners. Further, it seems logical to conclude that increased awareness and changes in attitudes on the part of parents and educators toward these individuals might have a significant impact upon the way in which the learning disabled view themselves, thus increasing their self-concept and affecting their emotional/social adjustment, and, in turn, their school performance and their contribution to society (Swanson, 1990). Therefore, it was hypothesized that a significant correlation exists between self-concept and reading achievement level of reading disabled students having an average level of intelligence.

Method

Subjects

While ideally correlational studies should be done on groups of 30 or more, and more than one school should be used from which to draw random samples, permission was only granted to this researcher to be in one particular school and to have access to those students only, for the purposes of this pilot study. Forty-five permission forms were distributed to students, whose names were submitted to the researcher by teachers of grades 3-6, as students thought to fit the guidelines for participation in this pilot study as set forth by the researcher. Thirty forms were returned granting parental permission; however, upon checking the permanent records for these students, 10 of them had to be eliminated due to their not meeting the set guidelines for
IQ or reading achievement level/academic grade placement. As a result, the remaining subjects used for this study were 20 children, 5 Caucasian males, 4 Caucasian females, 5 Black males, and 6 Black females, in grades 3 through 6 (M=4.75, SD=1.11), for whom written parental consent was obtained. As noted, these children were drawn from one public school in Rutherford County. This school was located in a small to medium-sized city having an economy dependent primarily upon the trade industries with students drawn from lower middle to middle income status levels. Nine of the children were Caucasian and eleven were Black. All the children were reading at least one grade level below academic placement as measured by the Tennessee Comprehensive Assessment Program testing (M=2.75, SD=1.25), and they had "average" range IQs as assessed by their WISC-R Full Scale IQ scores, (90-109, M=97.2, SD=7.47); therefore, they were classified by the researcher as "disabled" readers since their academic rate of reading achievement was significantly below their expected level of achievement.
Table 1

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>10.3</td>
<td>1.11</td>
</tr>
<tr>
<td>Grade</td>
<td>4.75</td>
<td>1.02</td>
</tr>
<tr>
<td>Full Scale IQ (WISC-R)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>97.2</td>
<td>7.47</td>
</tr>
<tr>
<td>Reading Achievement Total Score (TCAP/Stanine)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>2.75</td>
<td>1.25</td>
</tr>
<tr>
<td>Total Self-Concept Score (Piers-Harris/Stanine)</td>
<td>3.35</td>
<td>1.81</td>
</tr>
</tbody>
</table>

N = 20 (4 Caucasian females, 5 Caucasian males, 6 Black females, 5 Black males)

<sup>a</sup> Wechsler Intelligence Scale

<sup>b</sup> Tennessee Comprehensive Assessment Program

**Instruments**

Self-concept was assessed using the Piers-Harris Children's Self-Concept Scale (Piers, 1984), and reading achievement level was determined by the Tennessee Comprehensive Assessment Program (Williams, et al., 1989). In order to be classified as "reading disabled", for the purpose of this study, a child had to be reading at least one grade level below academic placement. IQ scores ranging from 90-109, plus or minus 3.19 were considered to fall within the "average" range of intelligence as assessed by the Wechsler Intelligence Scale for Children-Revised Edition (Wechsler, 1974).

Intellectual functioning was assessed by the WISC-R full scale scores routinely administered to all students in the Rutherford County Schools in Spring, 1990. Scores of 90 through
109 were classified as average. This IQ assessment tool was used in the school for testing purposes and, as such, was the one IQ score that the researcher had to access to for each subject in the study. The WISC-R is well known and widely accepted for use as a psychometrically adequate instrument whose usefulness as a clinical and diagnostic tool has been documented (Weschsler, 1974).

The Tennessee Comprehensive Assessment Program achievement test is mandated for grades 2-8 in this state, and it is given annually in the spring to all students in grades 1-8 within the school system to which the researcher had access. It is a combination of a criterion referenced test with a norm referenced test. This customized, norm-referenced test measures achievement at the same grade level nationally and is used in combination with criterion referenced items which measure the state curriculum. It uses multiple choice questions and has set time limits (Williams, et al., 1989). The score utilized to gather the reading achievement data for each student was the total reading score as assessed by TCAP which was administered to all Rutherford County students in the Spring of 1990.

The Piers-Harris Children’s Self-Concept Scale (Piers, 1984) was used to assess self-concept. It is a brief, self-report measure designed to aid in the assessment of self-concept in children and adolescents. Self-concept, as assessed by this instrument, is defined as a relatively stable set of self-attitudes reflecting both a description and an evaluation of one’s own behavior and attributes (Piers, 1984; Wylie, 1974).
Items on the scale are scored in either a positive or negative direction to reflect this self-evaluation dimension. A high score on the scale suggests a positive self-evaluation. The Piers-Harris focuses on children's conscious self-perceptions, rather than attempting to infer how they feel about themselves from their behaviors or the attributions of others (Piers, 1984). This definition is consistent with what Wylie (1974) refers to as a phenomenological view of "self-concept" and, as used in the Manual, is interchangeable with the terms "self-esteem" and "self-regard." It measures the construct of self-concept by presenting the subject with 80 self-descriptive declarative statements. The statements are worded in both positive and negative language to control for social desirability response sets (Piers, 1984). The manual for this instrument provides complete information regarding scale development, rationale, and standardization procedures. In addition to the original studies done in the 1960s on 1,183 children in grades 4 through 12 from one school district in Pennsylvania, results of recent studies investigating validity and reliability of the scale are reported in depth. Recent reliability studies generally confirm and expand on the original study's results. Test-retest reliabilities ranged from .42 to .96, with a mean of .73. Studies investigating internal consistency yielded coefficients ranging from .88 to .93 on the total scale. In another study using the scores from the original norm, the internal consistency coefficient for the total scale was .90, with the cluster scales ranging from .73 to .81. Thus the instrument appears to be
highly reliable in terms of temporal stability and internal consistency. The manual also described recent validity studies and provides tables summarizing results. Moderate relationships were reported with other measures of self-concept, and relationships with personality and behavioral measures were generally in the direction expected. Intercorrelations between cluster scales ranging from .21 to .59 were obtained, indicating a moderate degree of relatedness. As expected, higher correlations between items within scales were obtained. The 1984 revision of the manual contains extensive reviews of research on the psychometric properties of the scale and its use. In summary, the Piers-Harris is a norm-referenced, self-report measure designed to assess self-concept in children and adolescents. Standardization procedures are appropriate, and although norms are several decades old, subsequent research has generally provided continuing support for use of the instrument as it was originally intended.

Design

Although 30 subjects should be the minimum used in correlational studies, a N=20 was utilized for this pilot study. The researcher was only allowed access to one school, grades 3-6, from which to draw a sample. Since the subjects to be selected had to be determined to be "average" in IQ (score 90-109 on WISC-R) and "disabled" in reading (reading at least one grade level below academic placement/TCAP score) the researcher's population was limited to a pool of 45 students thought to fit this description as determined by their reading level/grade placement
and IQ scores. In addition, parental consent had to be obtained which further limited the available number of subjects. As a result, the final sample group consisted of 20 students (5=Black males, 5=Caucasian males, 6=Black females, 4=Caucasian females), in grades 3-6 (M=4.75, SD=1.02), ages 8-13 years old (M=10.3, SD=1.11), with average IQ as assessed on the WISC-R (M=97.2, SD=7.47), that were reading at least one grade level below academic placement.

Students' Total Reading stanine scores on the Tennessee Comprehensive Assessment Program achievement test were compared with their overall self-concept stanine scores on the Piers-Harris Children's Self-Concept Scale. These paired scores were correlated, and their resulting correlation coefficients were used as indication of the degree of relationship between the two variables.

Procedure

Only one school, grades 3-6, were available for participation in this pilot study. Teachers of these grade levels distributed parental permission forms to students whom they felt met the conditions as set forth by the researcher. Out of 45 distributed forms, 30 forms were returned granting the researcher permission to access records and to administer the self-concept assessment instrument. Of these 30 possible subjects, 10 had to be eliminated as they did not fit the guidelines established. Twenty subjects were then available for participation. Permanent records for these students were used to gather Full Scale IQ scores on the WISC-R and reading achievement
level as measured by the Total Reading score on the TCAP test from the prior year. Age, sex, and race were also noted from the records of these students. All of the 20 subjects were labeled "disabled" readers by the researcher for purposes of this study as all of them were of average IQ testing and reading at least one grade level below academic placement.

On March 26, 1991, the researcher administered the Piers-Harris Children’s Self-Concept Scale, a brief, self-report measure designed to aid in the assessment of self-concept in children and adolescents. Self-concept, as assessed by this instrument, is defined as a relatively stable set of self-attitudes reflecting both a description and an evaluation of one’s own behavior and attributes (Piers, 1984; Wylie, 1974). The 20 subjects were divided into groups of 5 students each for purposes of testing. Testing was started at approximately 8:30 a.m. and ended at approximately 11:30 a.m. Each group took approximately 30 minutes for the actual testing procedure.

Descriptive statistics were computed for the mean and standard deviation scores for grade, age, IQ, Total Reading stanine scores, and Piers-Harris total Scale Stanine scores. Total reading stanine scores from the TCAP reading achievement test and the total stanine scores on the Piers-Harris Self-Concept Scale were then correlated.
Data Analysis

The Piers-Harris Children's Self-Concept Scale (Piers, 1984) was administered to the sample group for whom the following data were noted.

Table 1
Comparison of Mean Scores and Standard Deviation Scores

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>SD</th>
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<tbody>
<tr>
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</tbody>
</table>

N = 20 (4 Caucasian females, 5 Caucasian males, 6 Black females, 5 Black males)

<table>
<thead>
<tr>
<th>Scale</th>
<th>(t_{xx})</th>
<th>Stanine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>68% 95%</td>
</tr>
<tr>
<td>Total Score</td>
<td>.90</td>
<td>.63    1.24</td>
</tr>
</tbody>
</table>

Note: All confidence intervals are two-tailed.
Although the sample was not a true random selection due to limitations placed upon the researcher by the school administration which limited access to schools and subjects, the Pearson r product moment correlation coefficient was still considered to be appropriate and was used to compute the correlation. As a result, the correlation between self-concept and reading achievement was found to have a positive linear relationship, the value of the correlation coefficient being .26, indicating a low positive correlation that was not significant at the .05 alpha level. Therefore, the original hypothesis that "a significant correlation exists between self-concept and reading achievement level of reading disabled students having an average level of intelligence" was not supported.

Table 3

Correlations of Piers-Harris Total Self-Concept Scores with Total Reading Achievement Scores

<table>
<thead>
<tr>
<th>Pilot Study</th>
<th>Sample</th>
<th>Age/Grade</th>
<th>Sex</th>
<th>n</th>
<th>IQ</th>
<th>Test</th>
<th>r</th>
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</thead>
<tbody>
<tr>
<td>Young (1991)a</td>
<td>Disabled readers</td>
<td>Mean age = 10.3</td>
<td>Both</td>
<td>20</td>
<td>Mean IQ = 97.2</td>
<td>TCAPb</td>
<td>.2614*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean grade = 4.75</td>
<td></td>
<td></td>
<td></td>
<td>(Total Reading Score)</td>
<td></td>
</tr>
</tbody>
</table>

*aCorrelations based on 80-item version of the Piers-Harris.

bTennessee Comprehensive Assessment Program

*NS
CONCLUSIONS

Interest in the relationship between self-concept and reading achievement has been extensive as documented in the previous review of literature, and it has also provided conflicting findings (Purkey, 1970; Wylie, 1979; Harter, 1983; Piers, 1984). Additionally, specific studies investigating the relationship between self-concept, as measured by the Piers-Harris, and achievement also provide inconclusive evidence (Piers, 1984). Moderate correlations between achievement and global self-concept were reported by a majority of the studies which showed considerable variation, ranging from nonsignificant to results in the .50s. As a result, there is a need to conduct further studies to determine the effects of self-esteem and self-efficacy beliefs on the academic, social, and emotional adjustment of our reading disabled students.
Time Schedule

Select subjects
February 1-15

Obtain Permission/School and Parental
February 16-28

Obtain achievement reading scores and IQ scores
February 16-28

Assemble group according to set criteria
March 1-25

Administer self-concept measuring instrument
March 26

Analyze Data
April 1-15

Write Report
April 16-22

Due Date
April 23
REFERENCES


Cooper, R. (1985). Personal counseling for the LD college student. In J. Gartner (Ed.), *Tomorrow Is Another Day* (pp. 115-117). Columbus: Association on Handicapped Student Programs in Postsecondary Education.


