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**CHANGES IN SELF-CONCEPT, CHANGES IN SELF:
A STUDY OF MIDDLE SCHOOL FEMALES**

by
Teresa Marie Mizner

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ABSTRACT

The purpose of this research is to investigate self-concepts among middle school females. A nine-week self-concept enhancement program is implemented and utilized as the treatment condition. The self-concepts of all participants are assessed and monitored in nine-week intervals. The instrument, Student Self-Concept Scale assesses: 1) Self-Confidence in four areas: self-image, academic, social, and composite; 2) Importance of self-image, academic, and social, and 3) an Outcome-Confidence composite. The results indicate that statistically significant differences exist at the pretest in two subscales: academic importance and social importance. At the posttest, statistically significant differences are detected in the academic importance subscale and in the outcome confidence composite. Overall, the results illustrate positive trends within the treatment group for each domain of the self-concept scale, with the exception of the decreased importance that all participants placed on self-image. Nine-week delayed tests in the experimental group reveal that increases from the posttest are maintained.

CHAPTER 1

INTRODUCTION

The concept of self has been considered by early theorists. In the 19th century, William James (1890) argued that the consciousness of the self involves a stream of thought (1890/1983). Charles C. Cooley (1902) had a more sociological perspective than James. Specifically, Cooley argued that self-conceptions are formed through the reactions of others. Henry Stack Sullivan (1953) also argued that self-conceptions emerge from social interaction with others.

James identified four constituents of the self: 1) the body, 2) the social self, 3) the spiritual self, and 4) the pure ego. The body refers to the physical self. It is also extended to the family. In other words, self-conceptions are in part made up of how we individually define ourselves and in relation to others. The social self, according to James, stems from the recognition one gets from others. For James, "A man has as many social selves as there are individuals who recognize him and carry an image of him in their mind" (1890/1983). The spiritual self refers to the inner, subjective being. Self-feelings are located within the spiritual self. Finally, the pure ego refers to consciousness. It is in the pure ego that reflections are carried out. The core of James' argument is that the consciousness of the self involves a continuous stream of thought amongst the selves.

While James recognized a social self as a part of the whole self, the social self is the substance of Cooley's theory. For Cooley, an individual sees oneself through the reactions of others. In doing so, other people appraise and react to the individual as an

object (Cooley, 1902). Cooley coined the term, “looking glass” to reflect interpretations of social evaluations.

Cooley identified three social references that every individual makes. The first is the individual’s imagination of one’s appearance to another person. Second is the imagination of his judgment of one’s appearance. Third, Cooley claimed that some sort of self-feeling results.

Sullivan, the third theorist described in this review, also placed an emphasis on social interaction. Like Cooley, Sullivan argued that our self-conception of others’ influence and guide our behavior (Sullivan, 1953). Furthermore, Sullivan believed that people cannot exist apart from their relations with others.

In addition, Sullivan addressed developmental issues. According to him, preadolescence is defined by the need for interpersonal intimacy. “Intimacy” refers to two people providing validation of all components of personal worth. Preadolescence is the time for “chums” and “gangs.” The need for interpersonal security is met through social interaction with peers during this stage. These early theorists laid the foundations for research on self-concept to follow.

Shavelson, Hubner, and Stanton (1976) formalized a theory on self-concept that was empirically based. Like James (1890), Shavelson, et al., identified the self as having constituents. In addition, these researchers created a hierarchical model for the organization of self-concept. At the top of the hierarchy is the general self-concept. The general self-concept is divided into academic and non-academic domains. The academic self-concept is divided into subject matters (i.e., mathematics, science, etc.). The non-

academic self-concept includes a social, emotional, and physical self-concept. In sum, Shavelson, et al., described self-concept as hierarchical, multifaceted, and differentiable from other constructs (Shavelson, et al. 1976).

Harter (1990) also identifies specific self-concept domains. Harter assesses global self-worth in adolescence by eight domains: scholastic competence, athletic competence, peer social acceptance, behavioral conduct, physical appearance, close friendship, romantic appeal, and job competence (Harter, 1990).

An abundance of research has been conducted concerning the relationship between gender and self-concept (AAUW, 1991; AAUW, 1995; Hattie, 1992; Wylie, 1979; Marsh, 1989; Osborne & LeGette, 1982; Wigfield & Karpathian, 1991). The findings available on the relationship between gender and self-concept have often been inconsistent.

Precautions, therefore, must be used when attempting to generalize research findings to larger populations.

One reason for the contradictions within the literature may be attributed to the uses of different constructs and definitions to represent the term, "self-concept." Frequently, the terms "self-concept" and "self-esteem" are used interchangeably by lay persons. A distinction is clearly made for the purposes of this paper. "Self-concept" refers to knowledge about one's self, such as one's perceived confidence in a variety of domains (James, 1890/1983; Harter, 1983; Shavelson, et al., 1976). "Self-esteem," however, refers to evaluative, or affective knowledge about one's self. It is an expression of approval or disapproval, indicating the extent to which a person believes s/he is competent, successful, significant, and worthy (Mullis, Mullis, & Normandin, 1992).

The current research utilizes an operational definition of self-concept as: a global term that attempts to describe a complex interactive network of self-perceptions a person holds about one's confidence in exhibiting certain behaviors and in having certain culturally valued personal attributes (Grisham, Elliot, & Evans-Hernandez, 1993). Again, in reviewing the literature, interpretations must be made carefully due to the plethora of constructs utilized, various assessments employed, and often the use of limited, restricted populations.

GENDER DIFFERENCES

Evidence Indicating Difference Exists

One of the most extensive studies conducted on female self-concept is that of the 1990 American Association of University Women. The national survey sampled three thousand boys and girls, ages nine to fifteen. Results indicate that a self-esteem gap separates the boys and girls as they enter adolescence. As boys and girls grow older, both experience a significant loss of self-esteem in a variety of areas. However, the loss is most dramatic and has the most long-lasting effects for females (AAUW, 1991). This study also reveals that more males than females enter adolescence with higher levels of self-esteem. Furthermore, many more young men than women leave adolescence with higher levels of self-esteem (AAUW, 1991).

Other key findings from the AAUW study show that adolescent girls are more likely than boys to have their sense of themselves decline and inhibit their actions and abilities. In addition, physical appearance, which is fundamental to the self-esteem of

young females and males, was rated more important to the self-image of young females. Society tells girls that their worth is dependent on their appearance (AAUW, 1995).

Furthermore, the AAUW study found that males tend to view physical changes positively, as getting bigger and stronger. Female beliefs, on the other hand, lead in a negative direction, reinforcing their declining self-esteem and gender stereotypes (AAUW, 1991).

Concerns about body-image are quite prevalent in females (Pipher, 1994; Orenstein, 1994; AAUW, 1995; Sugar, 1993). The body is experienced as a reflection of the self; it is often denigrated; it can be a source of conflict, shame, and inadequacy, as well as pride and pleasure (Rosenbaum, in Sugar, 1993). How the body is perceived by others, often with painfully acute self-consciousness, is an area of concern, and speculation for many adolescent females (Rosenbaum, in Sugar, 1993).

Backes (1994) accessed a 60-item survey in self-perception of over 1,000 middle school students. The survey assessed the self-confidence and self-image of the respondents. In comparison to males, the adolescent females experience a statistically significant decline in self-concept. In addition, the females in this study doubt their academic abilities more than males. The females also have less positive feelings of self-worth (Backes, 1994).

Harper and Marshall (1991), assessed gender differences in the number and nature of problems reported by used of the Mooney Problem Check List and Rosenberg's Self-Esteem Scale. Overall, among the participants (ages fourteen to sixteen), the females reported significantly more problems and lower levels of self-esteem than the males.

Females had more problems than males with interpersonal relationships, personal adjustment, health, and family issues (Harper & Marshall, 1991).

Gender differences in self-concept also were found in a study that looked at four grade levels: 6th, 7th, 9th, and 10th (Simmons, Rosenberg, and Rosenberg, 1973). More specifically, female self-concept was found to be more volatile than male self-concept. Significant gender differences were found in each grade. Rosenberg (1986) suggests that this finding is due to females' increased concern with other's attitudes towards them, and concern with physical appearance.

Another study that examined gender differences in grade levels also found statistically significant differences in gender among 4th, 5th, and 6th graders. The boys reported higher self-esteem than the girls (Alpert-Gills, & Connell, 1989). Moreover, when personality traits were examined, the children who scored predominantly masculine or androgynous, had positive correlations with high general self-esteem (Alpert-Gillis & Connell, 1989).

One measurement instrument that is often used to assess self-concept is the Self Description Questionnaire (SDQ), which has eleven subscales. The current version is III. Use of the previous I and II versions are abundant in the literature. Significant gender differences have been found using the SDQ I and II (Marsh, Parker, & Barnes, 1985). Specifically, males tend to score higher on five domains: general self, math, physical ability, physical appearance, and emotional stability. Reversed advantages were found for females on the subscales of verbal, same sex, and honesty (Marsh, Parker, & Barnes, 1985).

Marsh (1989) also utilized the SDQ II and III and found statistically significant sex effects. The total self-concept scores favored boys. Within the subscale breakdown, boys tend to have higher physical ability, appearance, and math self-concepts, while girls tend to have higher verbal and school self-concepts (Marsh, 1989).

In addition to gender differences, it is important (but not the focus of this project) to recognize investigations that assess differences across cultures. The AAUW study compared responses of Caucasian, African American, and Hispanic females. Results indicate that Hispanic females' self-esteem fell the most steeply. African-American females have the highest levels of self-esteem, which emerge throughout school. For these girls, their self-concept scores peak during high school (AAUW, 1995).

Furthermore, Dukes and Martinez (1994) found that gender had a substantially stronger and statistically significant effect on self-esteem than ethnicity. Specifically, males (which included African Americans, Hispanics, Native Americans, and Asian Americans) had higher levels of self-esteem on the Rosenberg Self-Esteem Scale than their female comparisons. One exception is African American females. In this instance, the African American females scored higher than Asian males (the lowest male group), followed by Hispanic, Caucasian, Native, and Asian females, respectively.

Evidence Against Gender Difference

Inconsistencies exist with respect to research on gender and self-concept (Wylie, 1979). Nonsignificant gender differences have been revealed in a number of studies (Osborne & LeGette, 1982; Mullis, Mullis, & Normandin, 1992; Wylie, 1979). In their

literature review, West, Fish, and Stevens (1980) also describe a general lack of agreement among studies as to gender differences in self-concept of academic ability.

In another study, Lerner, Sorell, and Brackney (1981) used a time-lag analysis method to investigate sex differences among five different cohorts of university students during the mid 1970's. No gender differences on mean self-esteem were found within or between the cohorts. While this may be due to a variety of design features, it is also important to take into consideration that the participants were older than the studies which have investigated adolescents. Also, the characteristics of university students may differ from non-university students. Therefore, this sample may not be representative of the general population.

RATIONALE

While the research does not suggest a distinct trend of self-concept by gender, sufficient evidence exists that suggests females may be more at risk for lower self-concepts than males. No research is available to indicate that females possess statistically significant higher levels of global self-concepts than males during adolescence. The sharpest drops in self-esteem for females occur in the years between elementary and middle school (AAUW, 1991).

Additionally, middle school has been noted as a difficult transition time, which negatively affects self-concept in children (Eccles, Wigfield, Flanagan, Miller, Reuman, & Yee, 1989). In their study of 1,450 students, Eccles, et al., found that self-esteem scores decline significantly after the elementary school transition (6th grade) to junior high (7th

grade). Moreover, children's self-esteem scores are at the lowest in the fall of their 7th grade year.

It has been documented that intervention programs are successful at enhancing self-concept. Hattie (1992) performed a meta-analysis on self-concept enhancement programs. Results indicate that programs were most effective for participants with previously diagnosed problems (i.e., low self-esteem).

A positive self-concept is not only a vital sign of mental health, it is also a connection to academic achievement and a direct link to career goals and hopes for the future (Sadker & Sadker, 1994). The development of a positive self-concept is critical at the middle school level, a time when students are gaining basic knowledge and skills, establishing patterns of interactions with ideas and people, and setting personal goals (Backes, 1994). Combined with the research that indicates females experience a difficult time (with respect to self-concept) and a willingness from school administration, an impetus for intervention arose for this study.

PURPOSE OF THE PRESENT STUDY

One purpose of this study is to implement a program designed to enhance self-concept in early adolescent females. The second purpose is to monitor the changes in self-concept of the participants in the program. The third purpose of the study is to compare observed changes in the control groups over the nine week period with the experimental group.

Three hypotheses are tested. First, it is predicted that the treatment group will benefit from the intervention. Second, it is hypothesized that the treatment group will

maintain their changes nine weeks after the self-concept class ends. The third prediction is that self-concept domains in the control groups will fluctuate during the nine weeks, with negative trends at the time of the posttest.

CHAPTER 2

METHOD

Participants. Participants were 76 students in 7th and 8th grades at a public, coeducational magnet middle school in Southwestern United States. The students were enrolled by self-selection in three all-female math and science classes. While exact demographics are not available, the students represent the following ethnicities: African American, Caucasian, Hispanic, and Native American, with ages ranging from 12-14 years.

The 7th grade treatment group was an all-female science class identified by school administrators, counselors, and teachers as most likely to benefit from the self-concept enhancement curriculum. This decision was made on the basis on verbal and physical fighting amongst the classmates. In addition, this class was identified as possessing challenges to classroom behavior management. The control groups included a 7th grade all-female math class and an 8th grade all-female science class.

Prior to the study, written parental consent was obtained from each participant. Some parents in the control groups did not give consent for their daughters to complete the Student Self-Concept Scales. These students were not asked to participate. All parents in the 7th grade experimental groups gave written consent for participation.

In addition to parental consent, written consent was obtained from each participant. The nature of the program was explained to the students as a study in female adolescent development. Some students in the control groups opted not to participate in the study. All students in the experimental group gave written consent prior to

participation. Questions were not asked of the students who chose not to participate.

Furthermore, no rewards nor bribes were given to those who participated.

Materials

Student Self-Concept Scale. The Student Self-Concept Scale (SSCS), Level 2, is a 72-item, multidimensional self-report measure of self-concept and related psychological constructs designed for students grades 7-12 (Gresham, F., Elliot, S.N., and Evans-Fernandez, S.E., 1993). Self-concept in the SSCS is defined as a complex, interactive network of self-perceptions a person holds about his or her confidence in enacting certain behaviors and in having certain culturally valued personal attributes (Gresham, et al., 1993). The conceptual foundation for the SSCS is based on four distinct theorists: 1) Bandura's theory of self-efficacy that relates specific, observable behavior to self-concept (1977, 1982, 1986); 2) Wylie's (1974) observations that self-esteem depends on the degree to which people see themselves as having certain attributes highly valued by their culture; 3) White's (1959) notion of effectance motivation, and 4) Shavelson, et al., (1976) research on various definitions of self-concept.

The SSCS provides a norm-referenced measure of self-perceptions in the following domains: 1) Self-Confidence: the level of confidence in ability to perform certain behaviors or have certain culturally valued personal attributes, 2) Importance: perceptions about the importance of performing certain behaviors or having certain culturally valued personal attributes, and 3) Outcome Confidence: the degree of confidence that positive outcomes will result from performing certain behaviors or having certain culturally valued personal attributes (Gresham, et al., 1993).

Gresham, et al., (1993) provide details of the development, scoring, reliability, and validity of the SSCS. Two methods of reliability were utilized in the SSCS: coefficient alpha and test-retest. The coefficient alpha reliabilities ranged from .89 to .92 (median = .90) for Self-Confidence Composite ratings and from .79 to .82 (median = .81) for Outcome Confidence Composite ratings. These coefficients indicated a relatively high degree of Composite scale homogeneity.

Subscale internal consistency estimates were lower, in part because Subscale calculations are based on fewer items. The ratings for Self-Confidence indicated alphas from .72 to .84. Importance Subscale ratings ranged from .76 to .88; the median Outcome Confidence Subscale alpha was .66. In addition, test-retest reliability ratings also indicated good stability for the SSCS, with scores ranging from .69 to .82 for secondary students.

Several studies were conducted to evaluate validity. Among the measures were: content validity, social validity, construct validity, and criterion-related validity (which were correlated with the Child Behavior Checklist, Coopersmith Self-Esteem, Self-Description Questionnaire - 1, and the Tennessee Self-Concept Scale).

An assessment concern with regards to self-reports generally cautions interpreters to be sensitive to social desirability. The authors incorporated a lie scale into the assessment to guard against social desirability. An example of an item from the lie scale is, "I always tell the truth." While responses on the lie scale were acceptable, a total of more than twelve points on such items would result in an unusable test. This did not create any problems for the study, as all students scored eleven or less on the lie scale.

Altogether, the results of the various measures indicate solid evidence in support for validity of the SSCS. Therefore, this instrument was chosen as an appropriate measure for the purposes of this study.

Self-Concept Drawings. In addition to the SSCS, participants in the experimental group were asked to draw their self-concepts. Plain white paper was handed out to each student with the following instructions at the top: "In the space below, draw something to represent YOU. Then use words or pictures to describe yourself. Be sure to balance each negative with a positive." The drawings were completed at the same time as the SSCS pretest and the posttest. No delayed measures for the drawings were taken.

Design and Procedure

Three classes made up the structure of the study. One class is the 7th grade experimental group. The experimental group participated weekly in a nine-week curriculum designed to enhance self-concept. The curriculum was substituted for the regular science class, held their regular classroom during scheduled class time. Two classes made up the control groups. One is a 7th grade control group, and the other is an 8th grade control group. All three groups completed the SSCS pretest, which was administered in October. The control groups were assessed during regularly scheduled class time. Pretests for the experimental group were conducted during the first day of the self-concept enhancement class. SSCS posttests were completed nine weeks after the pretests in December. Again, the control groups received the posttests during their regularly scheduled classes. The experimental group was assessed on the last day of the

intervention. Additionally, the experimental group was assessed a delayed test nine weeks after the self-concept curriculum ended (in February).

The control groups did not access the self-concept enhancement materials. The experimental group, however, participated in the curriculum, “Enhanced Self-Concepts, Enhanced Selves.” This program has been designed to address the decline in self-concept occurring in preadolescent girls. The purpose of the curriculum is to empower females with self-knowledge, clarification of belief systems and goals, and effective communication skills. The weekly topics include: 1) Awareness of self-concept and a vocabulary to describe feelings, inner and outer influences on self-esteem; 2) dealing with critical self-talk and put-downs, gender stereotypes; 3) effective communication skills with parents, siblings, and peers; 4) peer pressure and group identity; gang influences; 5) sexual harassment; the pregnancy problem; and 6) goals- how they are achieved and how they are sabotaged. Each participant was asked to keep a journal and complete take-home journal assignments. Each class session included role-plays and discussions.

Scoring

SSCS

Scores on the SSCS are completed after each statement is read. For example, a student reads, “I can give a good report in front of the class.” Ratings on “How Confident” are then made: (0) Not at all, 1) Not Sure, 2) Confident). Next, ratings are indicated for “How Important” a statement is: (0) Not Very Important, 2) Important, and 3) Critical; 57 items are rated in this format. The other 15 items are rated only “How Confident” (without additional ratings on “How Important”).

After the SSCS is completed, the scores are interpreted based on female norms. Standard scores and percentile ranks are computed for 1) Self-Confidence (in the areas of self-image, academic, social and composite), 2) Importance (in the areas of self-image, academic, and social), and 3) Outcome Confidence (the raw scores from the subscales of self-image, academic, and social make up a composite standard score and percentile rank).

Self-Concept Drawings

The students in the treatment group were asked to draw their self-conceptions on paper. The drawings were rated on three dimensions: tone, domains, and written emotion. Frequencies were calculated by a simple tally method. Initially, the drawings were rated by this researcher. The accuracy of the ratings were cross-rated by a colleague. The total number of agreements and disagreements across scoring was calculated, with an 81% inter-rater agreement.

The dominant tone of the overall format was labeled as positive, neutral, or negative. The drawing could consist of written expressions or pictures. The tone was identified as being the most representative of the entire drawing. An example of a positive picture is a drawing of a huge smiling face. An example of a neutral drawing would be a picture of a book. An example of a negative drawing would be one marked by (inferred) intended scribbling. Most drawings had a combination of tones. However, an overall tone was chosen to be the most representative of the entire drawing.

The second criterion rated were domains. Possible domains for this project were similar to domains in Lively and Bromley's (1976) work on children's perceptual responses. The domains for the self-concept drawings included: interpersonal/social,

academic, physical/self-image, physical activities, and hobbies/interests. The domains also were rated as positive, neutral, and negative. An example of a positive interpersonal/social domain is a written statement such as, "I have a lot of friends." An example of a neutral, academic domain is, "I am in seventh grade." Finally, an example of a negative physical/self-image is, "I hate my feet."

The third item taken into consideration was written emotion. Goleman (1995) identifies the following as "primary" human emotions: anger, fear, love, sadness, enjoyment, surprise, disgust, and shame. Goleman's list of emotions is utilized as possible responses on the drawings. Examples of written emotions include, "I love...", or "I'm angry." Each response was only scored once, and a tally of total responses was computed for each drawing.

CHAPTER 3

RESULTS

A number of statistical analyses were performed on the data. Initially, a one-way, three group (7th grade experimental, 7th grade control, and 8th grade control) analysis of variance was performed on the pretest. A one-way analysis of variance on the posttest data also was conducted. Furthermore, dependent sample t-tests were performed for pretest-posttest, pretest-delay test, and posttest-delay tests for the experimental group.

An additional, a one-way analysis of covariance was calculated for the posttests. However, due to the statistical design of covariation, a substantial amount of data were removed for the analysis. Thus, using this procedure, a smaller sample size was utilized.

Table 1 contains the analysis of variance pretest comparisons of mean standard scores and standard deviations:

Table 1. ANOVA Mean Standard Scores and Standard Deviations from SCS

Variable	<u>Pretest</u>			F
	7 th Experimental n=27	7 th Control n=20	8 th Control n=28	
Self-Confidence:				
Self-Image	97.44(12.34)	100.50(12.42)	98.79(15.73)	.29
Academic	93.81(18.59)	89.15(20.68)	100.79(15.36)	2.54
Social	93.00(24.23)	92.80(18.04)	97.07(15.36)	.39
Composite	94.78(17.31)	92.90(16.77)	98.68(15.72)	.78
Importance:				
Self-Image	99.15(17.43)	96.75(11.79)	97.21(14.96)	.17
Academic	113.11(12.05)	98.55(16.35)	107.79(15.57)	5.72**
Social	105.30(14.35)	91.35(13.32)	101.43(15.17)	5.56*
Outcome Confidence:				
Composite	100.63(14.23)	95.80(15.96)	95.89(14.95)	.88

*p < .05, **p < .01

Statistically significant differences exist between the groups on two variables at the time of the pretest. The first variable, "Importance: Academic" reflects differences between the 7th grade control and the 7th grade experimental groups, $F(2,72) = 5.72$, $p < .01$. A subsequent Newman-Keuls test indicates that the 7th grade experimental

($M = 113.11$, $SD = 12.05$) and the 7th grade control group ($M = 98.55$, $SD = 16.35$) are significantly different at the $p < .05$ level. The second difference is "Importance: Social, $F(2,72) = 5.56$ $p < .05$. A further Newman-Keuls test was also performed and indicated statistically significant differences between the 7th grade control ($M = 91.35$, $SD = 13.32$) and the 7th grade experiment group ($M = 105.30$, $SD = 14.35$) at the $p < .05$ level.

An analysis of variance was also completed for the posttest scores between the three groups. Table 2 contains means and standard deviations for each group:

Table 2. ANOVA Mean Standard Scores and Standard Deviations from SSCS

Variable	<u>Posttest</u>			F
	7 th	7 th Control	8 th Control	
	Experimental n=21	n=10	n=22	
Self-Confidence:				
Self-Image	104.14(15.84)	96.00(12.71)	98.55(19.78)	.96
Academic	106.14(14.58)	97.70(12.18)	95.95(18.30)	2.37
Social	105.57(15.84)	98.40(17.18)	100.27(19.73)	.73
Composite	106.33(15.52)	96.90(12.93)	98.36(18.43)	1.70
Importance:				
Self-Image	103.33(20.08)	93.90(12.45)	95.36(14.02)	1.68
Academic	116.81(13.90)	103.80(12.19)	106.36(17.83)	3.47*
Social	108.48(18.22)	97.70(7.89)	100.50(16.55)	2.02
Outcome Confidence:				
Composite	107.71(17.34)	99.90(14.67)	93.59(16.95)	3.84*

*p < .05

Statistically significant differences exist on the variable of "Importance: Academic," $F(2,50) = 3.47, p < .05$. A Newman-Keuls test indicates that the 7th grade experimental group ($M = 116.81, SD = 13.90$) significantly differs from the 7th grade

control group ($M = 103.80$, $SD = 12.19$). In addition, the “Outcome Confidence: Composite was significant, $F(2,50) = 3.84$, $p < .05$. The performance of a Newman-Keuls test reveals that the 8th grade control group ($M = 93.59$, $SD = 16.95$) is significantly lower than the 7th grade experimental group ($M = 107.71$, $SD = 17.34$).

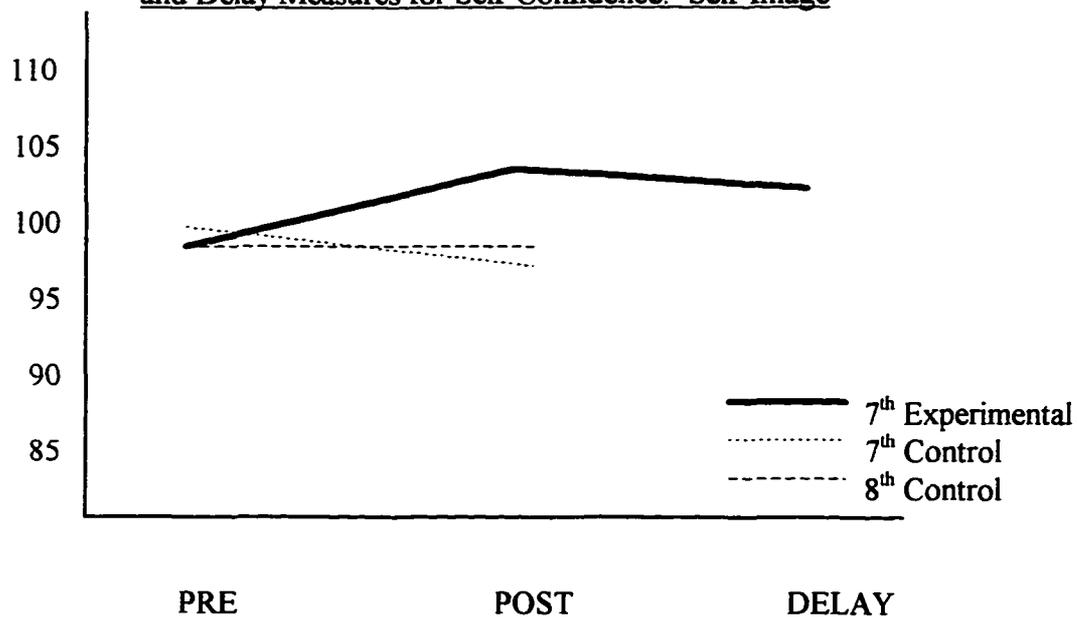
Because apparent differences in the pretests existed, subsequent analyses of covariance were performed (see Appendices 3, 4, 5). However, significance was not detected, in part due to the decreased number of participants in the groups. An examination of the mean standard scores reflect positive increases on each measure in the Student Self-Concept Scale for the experimental group.

Eight figures have been constructed to illustrate trends among the eight domains within the Student Self-Concept Scale (see figures 1-8). Positive tendencies are seen for the experimental group (pretest $n = 27$, posttest $n = 21$, delay tested $n = 22$). In addition, occasional positive trends are seen in the 7th grade control group (pretest $n = 20$, posttest $n = 10$) and stable trends are noted in the 8th grade control group (pretest $n = 28$, posttest $n = 22$).

Self-Confidence: Self-Image.

Figure 1 demonstrates a positive trend for the experimental group for “Self-Confidence: Self-Image.” A sample question for this domain is, “I am proud of who I am.”

Figure 1. Group Differences in Mean Standard Score Trends for Pretest, Posttest, and Delay Measures for Self-Confidence: Self-Image

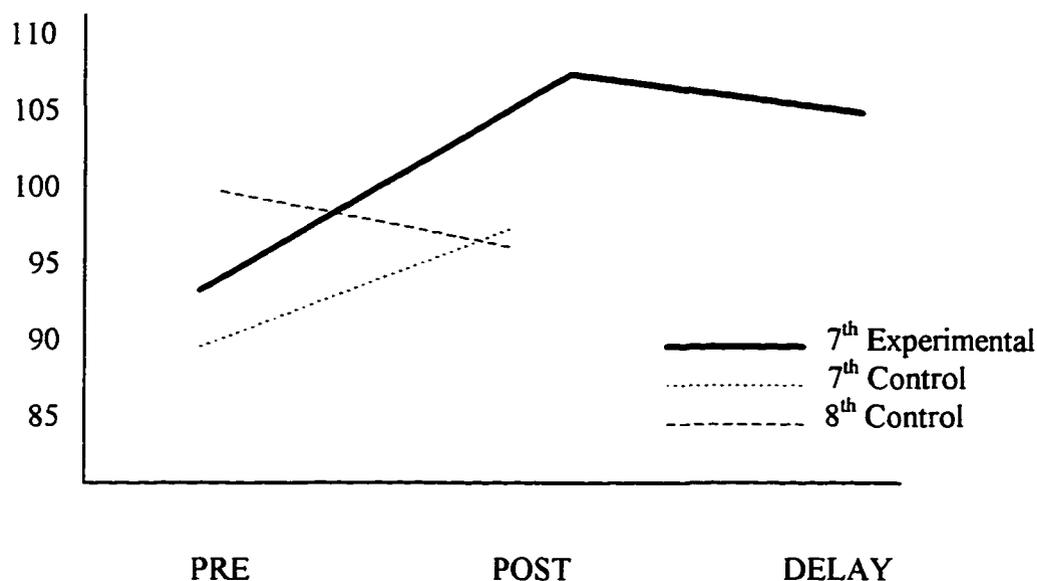


As reflected in Figure 1, the seventh grade control group initially has a slightly higher pretest score than the experimental and 8th grade control groups. The experimental group has a more marked advantage at the posttest. The higher scores for the experimental group are maintained at the time of the delayed test. Additionally, the 7th grade control group loses the pretest advantage at the time of the posttest. The 8th grade control group remains stable at the time of both tests.

Self-Confidence: Academic.

Figure 2 shows changes in group differences for “Self-Confidence: Academic.” A sample question is, “I can do my math work without help.”

Figure 2. Group Differences in Mean Standard Score Trends for Pretest, Posttest, and Delay Measures for Self-Confidence: Academic



Compared to the pretest, the experimental group has a radical increase in the academic self-confidence ratings at the time of the posttest. Furthermore, the advantage is maintained nine weeks later at the delayed test. There is a negative trend within the 8th grade control group, while the 7th grade control group demonstrates positive trends. The 7th grade control classroom had different teachers at the time of the pretest and posttest dates. At the time of the posttest, the students reported that the replacement of their previous teacher was due to inappropriate put-downs, comments about students' low levels in math abilities, and a global sense of negativity. The replacement teacher, however, was actively interested in self-esteem and mathematics among female students.

The natural occurrence of the change in teachers seems to demonstrate the crucial role a teacher has in relation to self-confidence and self-concept of students' lives. While

it is encouraging to see the positive shift, it is also worthwhile to think of the potential impact on lives that teachers have.

Self-Confidence: Social.

Figure 3 displays differences in the “Self-Confidence: Social” variable across the three groups. A sample question is, “I can make friends easily.”

Figure 3. Group Differences in Mean Standard Score Trends for Pretest, Posttest, and Delay Measures for Self-Confidence: Social

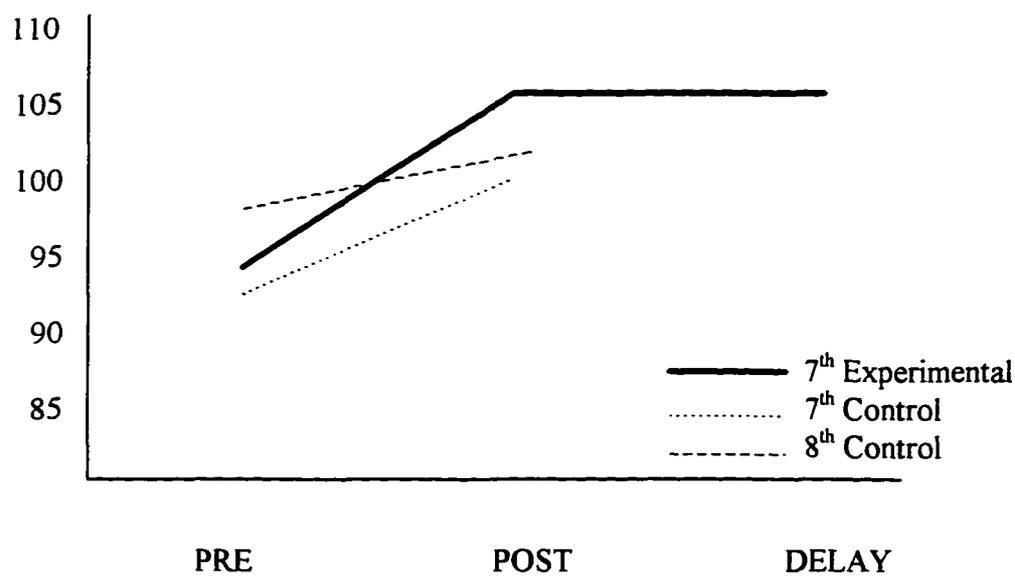


Figure 3 represents positive changes in self-confidence for social abilities across all groups. Once again, more favorable tendencies are noted for the experimental group. A part of the “Enhanced Self-Concepts, Enhanced Selves” curriculum was aimed at improving communication and social skills. Differences in the experimental group might reflect the reported “difficulties” by the school administration. As mentioned earlier, this group was identified as the class being the most “at risk” as indicated by physical violence that had occurred between classmates. Perhaps at the time of the pretest, this class had

lower self-confidence levels in socially related areas because of the presence of conflict.

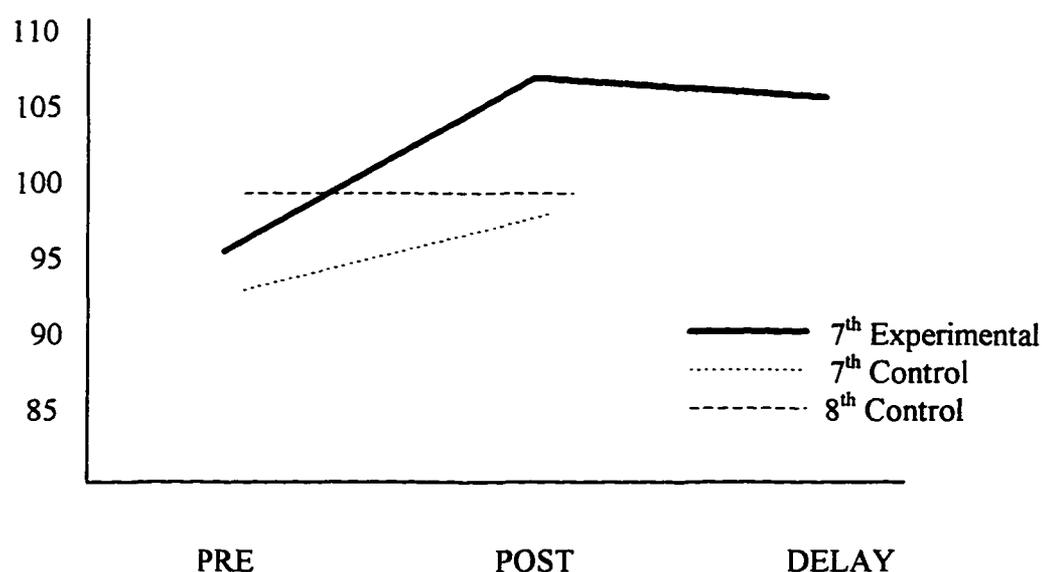
While the increase may be due to students feeling more comfortable with each other, it is apparent that the effect maintains nine weeks after the posttest.

In addition to the positive trends in the experimental group, a dependent sample t-test of the 8th grade control group points to statistical significance for pretest and posttest differences, $t(1,18) = -2.12, p < .05$. All groups demonstrate positive shifts within self-confidence in relation to social standard scores. This might be attributed to the passing of time and increased levels of comfort with peers.

Self-Confidence: Composite.

Figure 4 has the “Self-Confidence: Composite” scores, which is made up from the sum of self-confidence standard scores.

Figure 4. Group Differences in Mean Standard Score Trends for Pretest, Posttest, and Delay Measures for Self-Confidence: Composite

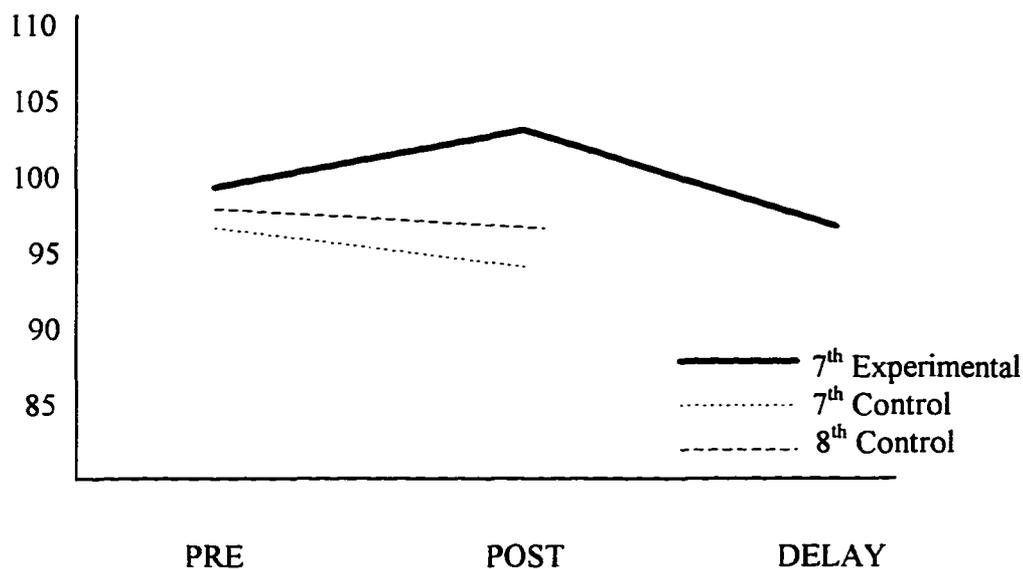


As the above figure indicates, the experimental group has dramatic increases in the composite score. Benefits from the intervention appear to remain nine weeks after the posttest within the experimental group. A subsequent dependent sample t-test reveals statistically significant differences from the posttest to the delay, $t(1,19) = -2.36, p < .05$. Perhaps it is possible to infer that the overall self-confidence continues to improve as students utilize the skills that were taught in the intervention class. The 8th grade control group has the highest scores at the pretest, with little variation at the posttest. Also of interest is the positive shift in the 7th grade control group. It appears that the positive influence of the replacement teacher may have influenced the students' overall self-confidence.

Importance: Self-Image

Figure 5 demonstrates variations in scores in the "Importance: Self-Image" domain. A sample item is, "I am proud of who I am" (self-image); the level of importance is then circled.

Figure 5. Group Differences in Mean Standard Score Trends for Pretest, Posttest, and Delay Measures for Importance: Self-Image

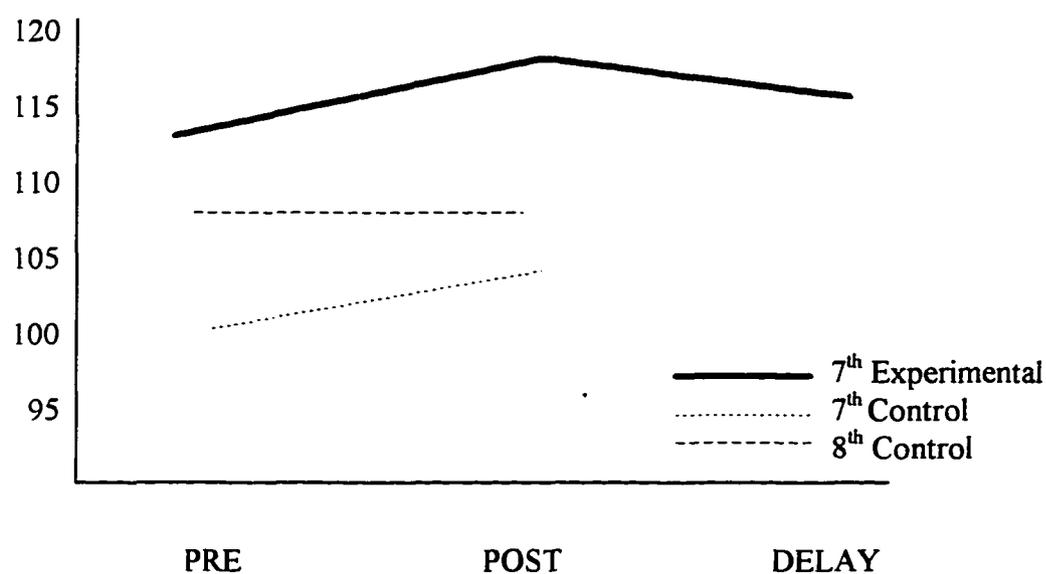


While all groups decrease their ratings of the importance of self-image, there is an increase at the time of posttest in the experimental group. Perhaps this is due to increased sensitivity to self-awareness and body-image that occurred as a result of the treatment. It was unexpected, but encouraging that the control groups decreased their ratings of importance of self-image.

Importance: Academic

Figure 6 displays differences on “Importance: Academic” ratings. A sample item is, “I can speak in class when my teacher calls on me” (confidence); level of importance of the statement is then calculated.

Figure 6. Group Differences in Mean Standard Score Trends for Pretest, Posttest, and Delay Measures for Importance: Academic

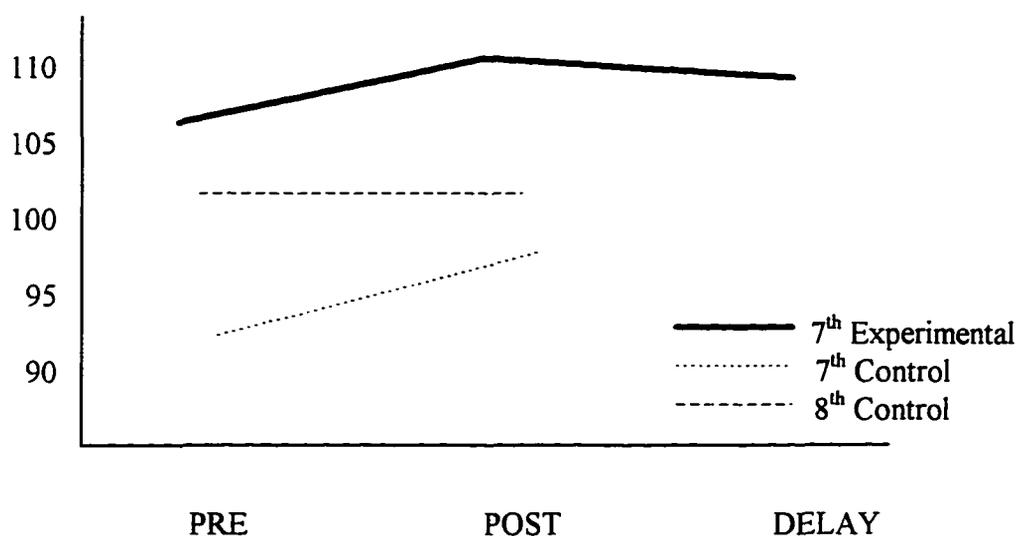


The experimental group places significantly higher levels of importance of academic ratings at the pretest $F(2,72) = 5.72, p < .05$, and the posttest, $F(2,50) = 3.47, p < .05$. Again, there is a peak at the time of posttest, with maintenance for nine weeks at the time of the delayed test. It is interesting that in addition to the increase of self-confidence of academics, the level of importance also increases in the 7th grade control group. This seems to lend further support for the advantages of the replacement teacher and to the benefits of the intervention. Once again, the 8th grade control group scores appear constant at the pretest and posttest.

Importance: Social

Figure 7 shows differences in “Importance: Social” among the groups. A sample item for this domain is, “I like to be with others” (social); the level of importance is then indicated.

Figure 7. Group Differences in Mean Standard Score Trends for Pretest, Posttest, and Delay Measures for Importance: Social



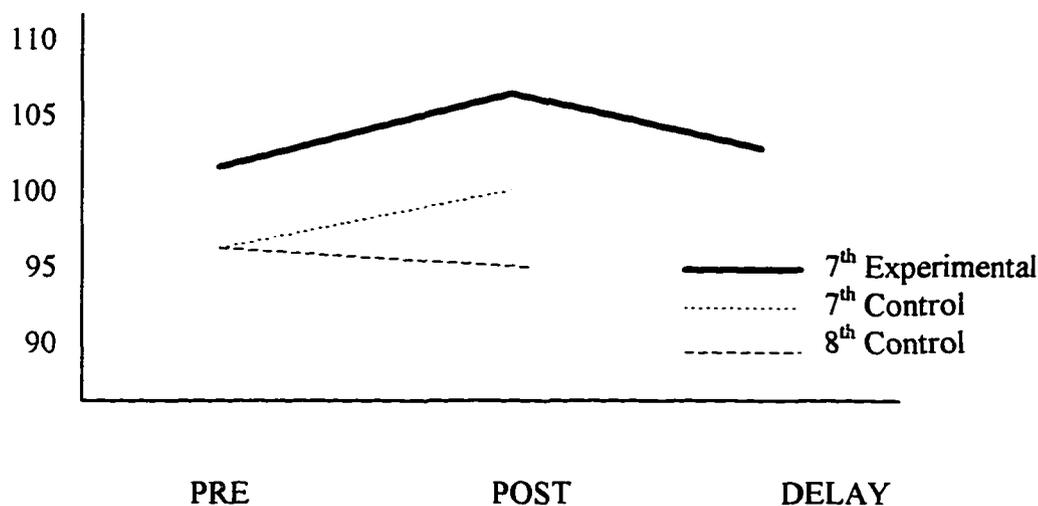
As mentioned earlier, there is statistical significance for the pretest ratings of importance on social scores, $F(2,72) = 5.56, p, < .05$. Substantial differences exist between the treatment group and the 7th grade control group at the pretest and posttest. Also evident in the figure is a consistent trend in the 8th grade control group.

Outcome-Confidence: Composite.

The composite score for “Outcome-Confidence” represents the degree of confidence students feel that they can perform certain behaviors or have certain culturally valued personal attributes. The composite score is obtained after summations of

confidence standard scores are made. Figure 8 depicts group scores to reflect composite scores for outcome-confidence.

Figure 8. Group Differences in Mean Standard Score Trends for Pretest, Posttest, and Delay Measures for Outcome-Confidence: Composite



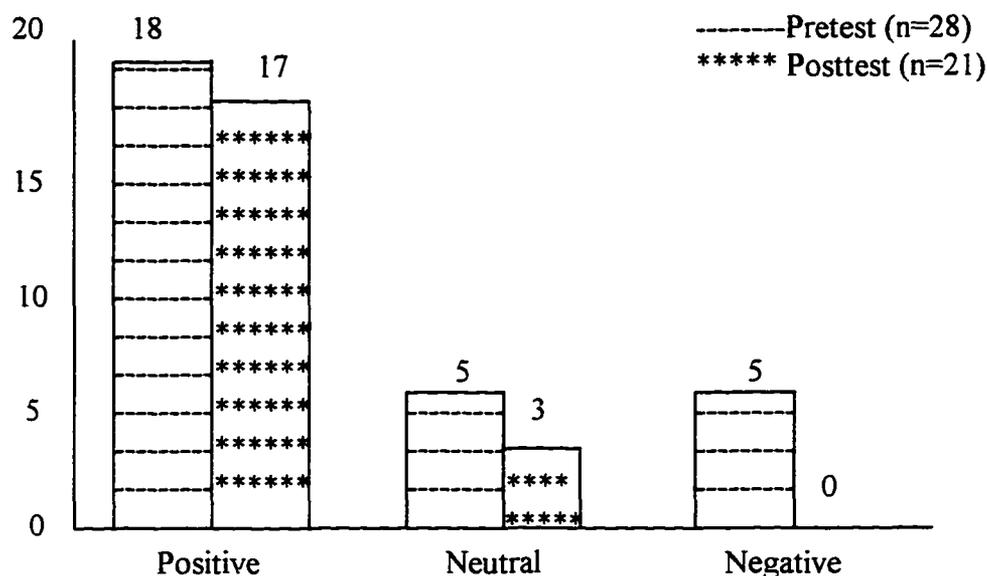
The patterns illustrate statistical significance at the posttest for the experimental group, $F(2,50) = 3.84, p < .05$. This finding demonstrates that while the experimental group gained confidence at the pretest, a negative trend is noticed at the delayed test. Positive trends are apparent in the 7th grade control group, which may be related to the shift in teachers. The 8th grade control group demonstrates a slight negative trend within the composite scores.

Self-Concept Drawings.

As mentioned earlier, the self-concept drawings were rated on overall tone of the format, domains, and written emotion. Again, the accuracy of the ratings were cross-rated by a colleague, yielding an 81% inter-rater agreement. Because of small numbers, means

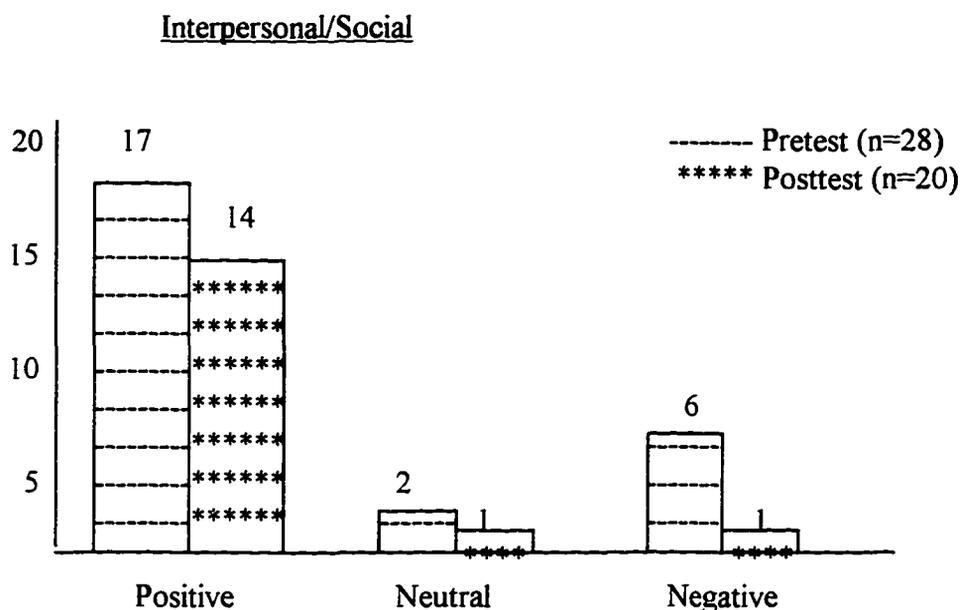
and standard deviations are not presented. Graph 9 displays the frequency in responses in format.

Graph 9. Self-Concept Drawings. Frequency of Responses: Format

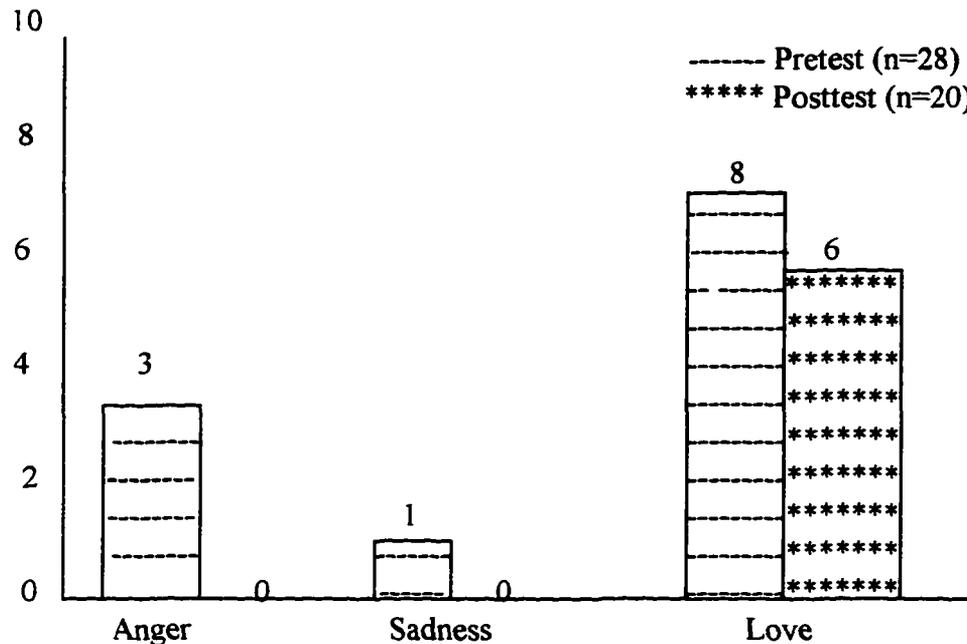


The tone of the overall format was generally positive at the pretest and the posttest. At the pretest, five drawings were identified as having a dominant negative tone. All of the posttest drawings, however, were either positive or neutral (no negatives). An example of a drawing with a positive format is a picture of a heart with the following words surrounding the heart: "happy," "smart," "nice," "loving," "friendly," and "sweet." An example of a drawing rated as having a neutral tone is one with a picture of a stereo and a running shoe. An example of a picture with a dominant negative tone is one with scribbles and the following words: "waiting," "mess-up," "suicidal," and "angry."

Graph 10 displays the number of drawings with responses in the interpersonal/social domain.

Graph 10. Self-Concept Drawings. Frequency of Responses:

At the pretest, seventeen students created drawings that were labeled as positive interpersonal/social responses. Fourteen students drew pictures with positive interpersonal/social responses at the posttest. Overall, the pattern of frequencies in these illustrations support Sullivan's (1953) discussion on preadolescents' need for interpersonal intimacy. Examples of such responses include: "I'm nice," "peace with others," and "friendly." In comparison to the pretest, neutral interpersonal responses were fairly stable at the posttest. An example of a neutral interpersonal rating is a picture of a telephone. Negative interpersonal/social responses occurred the most often in the pretest (a total of 6) than the posttest (1 response). An example of a negative interpersonal/social response is the statement, "I wish boys liked me." Graph 11 contains the frequency of responses of written emotion.

Graph 11. Self-Concept Drawings. Frequency of Responses: Written Emotion

Goleman (1995) identifies the primary human emotions as anger, fear, love, sadness, enjoyment, surprise, disgust, and shame. Of these, only anger (or angry), sadness, and love were identified as written emotions in the drawings. Examples of written emotions include, "I love...", "I'm angry," and "I'm sad." Of interest are the patterns within the negative emotions. Anger and sadness were expressed in the pretest drawings, but absent in the posttest drawings. While "love" was more prominent in the 28 pretests (8 responses) it was also the prominent written emotion at the 20 posttest (6 responses).

Pearson correlations were performed on the self-concept drawing data. However, because of the small number of frequencies, nonsignificant correlations were revealed. The correlations, therefore, are not reported.

Rating the self-concept drawings was very difficult because of the high level of subjectivity involved. For example, one student drew a picture of a large, fully blossomed flower. After looking at the picture, one might rate this as neutral or positive. However, a caption below the flower stated, "I feel like a flower, about ready to lose everything." While there was an 81% agreement in the ratings, room for error still exists.

It was interesting to compare pretest and posttest drawings within the group. One pretest/posttest comparison had written "angry," "lost," "suicidal," and "waiting" at the pretest. The posttest, drawing, however, had the following words on it, "peaceful," "happy (most of the time)" and "confident." Such comparisons weren't possible for all students, as some drawings did not have names on them. It would be incorrectly overextending the effects of the program to state that the curriculum is fully responsible for such changes in this student's drawing. This class was identified as having the most students "at-risk." It is possible that some the students may have been receiving other forms of intervention that coincided with the "Enhanced Self-Concepts, Enhanced Selves" class. Factors outside of the intervention cannot be accounted for, but may not be ignored.

CHAPTER 4

DISCUSSION

Attempts are often made to explain experimental effects. Such effects are usually attributed to three factors. The first explanation is that effects are due to identified treatments. The treatment effects are obvious in this experiment, as illustrated by the previous figures. While not all of the increases were statistically significant, increases within each domain (except for the “Importance: Self-Image” scores) for the 7th grade experimental group are visible.

Second, effects are often discussed in terms of error. Error appears to be minimal and accounted for by the use of a reliable instrumentation, the SSCS. Appropriate test construction was performed by the authors of the SSCS. However, room for error exists because of participant drop out. Each group had a loss of participants. Information on why the students dropped out is not available. Such effects can be extremely biasing on experimental results. Precautions, therefore, must be taken in account when generalizing the results of this study. One can precisely state that the effects apply only to the participants who completed the assessments. Beyond that, however, generalizability is limited.

Finally, a discussion on confounding variables must be acknowledged when interpreting experimental effects. The most obvious confounding variable in this study is the shift in teachers within the 7th grade control group. Positive shifts within four of the 7th grade control group scores are noted: 1) Self-Confidence: Academic, 2) Self-Confidence: Composite, 3) Importance: Academic, and 4) Outcome-Confidence

Composite. It is crucial to note that only ten participants completed the posttest in this group. While other students were present at the time of the posttest, some opted not to participate. There may be differences among the students that chose to participate and those that did not. For example, perhaps the ten that did participate felt that they had some personal responsibility in having their first teacher replaced. If so, it is possible that these students had an elevated sense of accomplishment. It is also possible that the shift in teachers may be partially responsible for this effect. The ten posttest participants do not represent any other population because of the confounds present (i.e. the shift in the teacher and the decreased, small sample size).

Overall, the intervention group was shown to demonstrate enhanced self-concepts (as measured by the SSCS) among the students in the treatment group. Each domain of the Student Self-Concept Scale had increased mean standard scores, with the exception of "Importance: Self-image." In comparison to the 7th and 8th grade control groups, the experimental group consistently rated higher across all domains at the posttest and the delay test.

Two hypotheses were confirmed. The first confirmed hypothesis is that the treatment group appears to have benefited from the "Enhanced Self-Concepts, Enhanced Selves" curriculum. This is evident in the one-way analyses of variances. Statistically significant differences were detected at the posttest in two domains. First, the experimental group differed significantly in academic importance. Second, the experimental group significantly differed in their Outcome Confidence Composite scores.

The second hypothesis was that apparent benefits would be maintained at the time of the delayed test (nine weeks after the curriculum ended). Statistically significant differences were detected in the Self-Confidence Composite Scores. The difference was an increase from the posttest to the delayed test.

The third hypothesis was not confirmed. It had been predicted that the control groups would have negative trends in self-concept during the nine week period. Negative trends are evident in the 8th grade control group on the Self-Confidence: Academic subscale, while the 7th grade control group demonstrated a positive shift for this subscale. Slight negative trends exist in the 8th grade control group on the subscale of Outcome-Confidence: Composite.

Generally, the 7th grade control group showed positive trends among the subscales at the time of the posttest. As mentioned before, generalizations by this group are limited because of confounding variables.

The common trend within the 8th grade control group was one of stability, with little variation. While this observation does not support the predication of negative trends among the comparison groups, it does lend further support to the positive effects of the treatment. One can observe the effects of treatment by comparing the positive patterns evident in the experimental group with the relative stable patterns of the 8th grade control group.

Also of importance is to note that while the 8th grade control group did not participate in the “Enhanced Self-Concepts, Enhanced Selves” program, this group was simultaneously a part of another study. The 8th grade control group participated

concurrently in interviews and observations with another researcher who was also investigating gender issues. This occurrence limits the likelihood of students in 8th grade control group having elevated senses of importance for being chosen to be a comparison group.

Again, it appears that the 7th grade experimental group was more comparable to the 8th grade control group (than to the 7th grade control group). The experimental group was identified as the most “at-risk.” However, the students in the experimental group scored higher on the four of the subscale pretests (Importance: Academic; Importance: Social; Importance: Self-Image, and Outcome-Confidence: Composite). Comparing the pretest differences in the 7th grade control group to the 7th grade experimental group, one might think that the students in the control group were more “at-risk.” In examining the group differences, it is crucial to look at the number of participants in the groups. The 8th grade control (n = 28 at the pretest, n = 22 at the posttest) and the 7th grade experimental group (n = 27 at the pretest, n = 21 at the posttest, and n = 22 at the delay test) had similar numbers of participants. The 7th grade control group, however, had considerably fewer participants (n = 20 at the pretest, n = 10 at the posttest).

Another factor to consider is that students dropped out of all three groups. While this may be due to schedule conflicts or class changes during the course of the treatment, other possibilities for the dropout rate may exist. It would be interesting to track the females that changed classes. It is also important to consider is the characteristics of students who enrolled themselves in the all-female student classes.

The nature of the all-female classes is self-selection. Specific results may be generalized only to the participants of this study. It would be interesting, however, to compare similar measures to the females that did not to enroll in the same-sexed classes. Perhaps differences exist in students that prefer coeducational classes.

Although the natural occurrence of the 7th grade control group teacher replacement has been mentioned, it is noteworthy to discuss the nature of instructional environment. During classroom observation, the teachers of the all-female classes appeared to be very aware of gender issues within education. Research shows that classrooms are quite often sexist arenas, particularly in math and science classes (AAUW, 1995; Grossman & Grossman, 1994; McCormick, 1994,; Orenstein, 1994; and Streitmatter, 1992). It may be possible that the overall pattern of increased scores in the 7th grade control group may reflect the replacement teachers' awareness and efforts to minimize gender issues within education.

In general, the "Enhanced Self-Concepts, Enhanced Selves" curriculum appears to be beneficial for the students that completed the SSCS ratings throughout the study. Future research could expand in the areas of what isn't presently known: which parts of the intervention were most valuable to the students, whether males would benefit from similar programs, what type of females benefited the most, and what the longer-lasting effects of the treatment are.

A frustration of conducting research is the frequent existence of a gap between empirical findings and practice. A plethora of research findings reveal that middle school students, especially females, experience a decrease in self-concept during early

adolescence (Eccles, et al. 1989; Backes, 1994; AAUW, 1991; AAUW, 1995; Marsh, 1989; Orenstein, 1994; Sadker & Sadker, 1994; and Rosenberg, 1986). Such empirical evidence should lead to a further impetus for intervention. Programs such as the “Enhanced Self-Concepts, Enhanced Selves” should be utilized as intervention strategies within the educational context.

To consider maximizing the effects of the self-concept enhancement programs, it is necessary to examine the structure of the current program. For example, beyond implementing intervention classes, it appears crucial to consider ongoing intervention. Future research could also address whether longer interventions are more beneficial than the typical six to nine-week classes. In addition, perhaps the size of the intervention classes need to be examined. Specifically, would smaller groups benefit more than larger groups? Another consideration is prevention at the elementary school level for all students.

Self-concept plays a crucial role in identity formation (James, 1890/1983; Cooley, 1902; Sullivan, 1953; Harter, in Sternberg & Kolligian, 1990, and Rosenberg, 1986). Preventing the development of a negative self-concept, or intervening to promote the growth of healthy self-concepts seems critical, especially at the middle school level. As the legendary William James stated, “There is but one cause of human failure and that is man’s (sic) lack of faith in his (sic) true self” (1890/1983).

Appendix A. ANCOVA Mean Scores for Pretest, Posttest, and Delay Measures
the Student Self-Concept Scale for 7th Grade Experimental Group

Variable	Pretest n=17	Posttest n=17	Delay n=17
Self-Confidence:			
Self-Image	99.29(12.39)	105.00(16.46)	104.06(15.21)
Academic	95.76(16.27)	106.76(15.06)	104.41(14.77)
Social	99.24(14.52)	107.47(15.84)	107.59(12.70)
Composite	97.71(15.39)	107.65(16.73)	106.47(15.15)
Importance:			
Self-Image	98.06(18.23)	103.88(20.51)	94.88(18.79)
Academic	113.41(12.09)	117.29(15.18)	114.71(14.17)
Social	107.71(13.62)	110.76(18.12)	108.41(16.33)
Outcome Confidence:			
Composite	103.35(14.80)	109.64(15.10)	100.76(16.96)

Appendix B. ANCOVA Mean Scores for Pretest, Posttest, and Delay Measures
the Student Self-Concept Scale for 7th Grade Control Group

Variable	Pretest n=10	Posttest n=10	Delay NA
Self-Confidence:			
Self-Image	97.20(11.58)	96.00(12.71)	NA
Academic	87.20(23.02)	97.70(12.18)	NA
Social	92.00(20.72)	98.40(17.18)	NA
Composite	90.60(19.73)	96.90(12.93)	NA
Importance:			
Self-Image	98.70(10.34)	93.90(12.45)	NA
Academic	103.40(14.18)	103.80(12.09)	NA
Social	92.50(9.56)	97.70(7.89)	NA
Outcome Confidence:			
Composite	92.60(15.88)	99.90(14.67)	NA

Appendix C. ANCOVA Mean Scores for Pretest, Posttest, and Delay Measures
of the Student Self-Concept Scale for 8th Grade Control Group

Variable	Pretest n=19	Posttest n=19	Delay n=19
Self-Confidence:			
Self-Image	97.95(18.21)	98.00(21.07)	NA
Academic	99.00(16.26)	96.68(19.30)	NA
Social	95.63(15.18)	101.89(20.17)	NA
Composite	97.05(16.44)	99.16(19.35)	NA
Importance:			
Self-Image	96.84(15.11)	93.10(13.89)	NA
Academic	107.63(15.88)	106.95(17.41)	NA
Social	100.68(14.66)	100.42(16.56)	NA
Outcome Confidence:			
Composite	93.95(15.92)	93.00(17.21)	NA

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