Multi-Dimensional Self-Concept in Junior High School Students: Issues of Gender, Intelligence and Program Effects

by

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Abstract

This study investigated levels of general, academic, and social self-concept in junior high school children. The effects of Gender, IQ and achievement level, as well as type of program were also considered in relation to self-concept.

Subjects were 85 students in grades 7 and 8 attending a large comprehensive high school, 40 of whom participated in a specialized Talented and Gifted (TAG) program. The remaining 45 were drawn from the regular school population and constituted a comparison group. Measurements included the Piers-Harris Childrens' Self-Concept scale and the Otis-Lennon Mental Ability Test.

Results indicated no significant differences between groups on measures of general or social self-concept. On measures of academic self-concept, TAG students scored significantly higher than students from the regular program. With regard to gender effects, no significant differences emerged between males and females on measures of self-concept. Finally, no significant differences were determined on measures of self-concept between TAG participants scoring higher on measures of IQ and achievement and those scoring lower. Educational implications and suggestions for future research are discussed.

Résumé

Le but de cette étude était d'examiné les niveaux concept de soi généraux, académique, et sociaux des enfants doués. Les facteurs tel que genres, niveaux qi, achèvement et effets de programmution ont aussi été considéré dans l'ètude. Les sujets de cette étude était 85 étudiants en secondaire I et II. 40 de ces étudiants ont participé dans une programme "TAG" (Talented and Gifted Program). Les autres 45 étudiants étaient enregistred dans le programme regulier, et ils ont constituté le groupe de contrôle. Les mesures ont inclus le Piers-Harris Childrens Self-Concept Scale et le Otis-Lennon School Ability Test.

Les résultats ont indiqué pas de différences significatives entres les groupes en mesures de concept de soi géneraux ou sociaux. En concept de soi académique les etudiants TAG ont mieux réussi que les autres. Les résultats ont aussi indiqué pas de différences significatives entres les étudiants masculins et les étudiants feminins en mesures de concept de soi. Finalement les participants ayant réussi des résultats académique éléves, ont obtenu des résultats concept de soi supérieur que les autres. Les implications pedogogiques et les suggestion puor des études futurs sont aussi discuté.

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CHAPTER I

Introduction and Review of The Literature

Introduction: Theoretical Considerations

An important aspect of the gifted child is the affective or emotional domain. Ross and Parker (1980) stated that the social aspects of gifted children generally receive significantly less attention in research than aspects which relate to cognitive or intellectual factors. The last decade has witnessed changes in this particular bias. Beginning with studies by Passow (1979; 1981) and Tannenbaum (1983) researchers have become interested in the gifted child's entire personal identity. Of specific interest in this paper is the area relating to self-concept. With regard to self-concept, current theorists are especially interested in the factors that play a role in the evolution and enhancement of this complex structure.

A brief definition of self-concept describes it as a series of attitudes regarding one's self. Many believe that these attitudes of the self are formed through experience, and are inherent and necessary to all normal development (Gruder, 1977; Sears & Sherman, 1964).

Rogers (1961) offers a similar definition suggesting that self-concept is a set of perceptions, interpretations, and evaluations regarding one's self.

The idea that self-concept is principally a social phenomenon has been postulated by several researchers (Cooley, 1902: Harter, 1983; Mead, 1925). This "social self" view of self-concept has remained, although the field of psychology in general has undergone many significant changes. For example, Cooley (1902) proposed the theory of the "looking glass self". The underlying assumption of this theory is that we learn to see ourselves through the mirror of the opinions and expectations of those others--mother, father, siblings, friends--who matter to us. Our subsequent behavior can not help but be shaped by this "looking-glass self".

Similarly, Mead (1925) posited that individuals accept the basic attitude that others take toward them. Even as recently as 1983, Harter suggested that a person's self-image was merely a reflection or product of how we imagine others view us. This idea of a socially derived sense of self-worth is still acceptable. In fact, the majority of studies currently analyzing self-concept acknowledge ones' social system as a significant catalyst to the development of a healthy self-concept.

Social Comparison Theory and Self-Concept

As has already been suggested, children's self-perceptions, including those of gifted children, are inevitably influenced by the social environment in which they reside (Coleman & Fults 1982). Social Comparison theory too emphasizes the significance of the social environment in the formation of self-concept (Festinger, 1954). In addition, Festinger suggests that we actively select others in our environment as a basis for comparison when attempting to evaluate ourselves or our own performance. Moreover, given the choice to choose others similar in ability, or dissimilar, we are more likely to choose similar others when selecting people for comparisons. These comparative evaluations are carried out when an objective standard for comparison is not available. Festinger further states: "It is within our social systems that we learn to create and communicate our ideas ... through interaction we derive a sense of self-worth " (Festinger, 1954; p. 121). This idea differs significantly from that of the "looking glass self". Within social comparison theory, the individual is actively seeking out <u>similar</u> others to assist in stable self-evaluations. The "looking glass self" hypothesis suggests a more passive method of using others for developing a sense of self-worth. Festinger continues... "we learn about who we are, or can become, by comparing

our performances, ideas and opinions to those of other people " (p. 123). (i.e., The individual is active in shaping their world).

In view of Festinger's hypotheses, imagine a gifted child segregated from average-ability peers for special instruction. In what ways will this new environment, and resulting experiences, shape that youngsters self-concept? The same question can be asked of any social system with regard to its members. Festinger's theory of social comparisons (1954) attempts to answer these types of questions. Based on issues of performance and ability, Festinger claims we compare ourselves to significant others similar in ability prior to forming attitudes regarding ourselves.

The Multi-Dimensional Aspects of Self-Concept

In contrast to earlier work, recent research regarding self-concept has theorized that, as a psychological construct, self-concept is a domain-specific structure (Byrne, 1986; Marsh, 1989, Marsh & Shavelson, 1985; Shavelson, 1985). Basically, this implies that an individual's self-concept is comprised of several different aspects, for example, the academic or social self-concept. Each is theorized to be specifically related to a particular type of experience or context.

These and various other related issues are addressed in the following literature review on gifted children and self-concept.

Review of The Literature

The impetus for this review stems from current research into the gifted child's self-concept. Controversy over whether or not gifted students demonstrate elevated levels of self-concept when compared to nongifted students is a major force behind these types of studies. Important factors such as levels of IQ, achievement, gender, and types of program are also discussed. Finally, the theory of Social Comparisons and its implications to domain-specific self-concept are considered.

General Self-Concept and Gifted Children

Positive Findings. The majority of studies assessing general self-concept of gifted children in comparison to average children report that gifted children demonstrate higher levels of self-concept.

Whether or not differences are due to various experimental methods, types of programs, instruments used, or simply the existing social milieu, is a source of interest for educational researchers.

Research that has reported higher general self-concepts in gifted children has been conducted by Cornell, Pelton, Bassin, Landrum, Ramsay, Cooley, Lynch and Hamrick (1990). Using the Coopersmith Self-esteem Inventory, they compared the self-concepts of 83 gifted students, ages 7-11, to the norm group of the Coopersmith instrument. The gifted group demonstrated significantly higher self-esteem scores than the comparison group. Similarly, research conducted by Karnes & Wherry, (1981), Ketcham & Snyder, (1977), and Tidwell, (1980) all made comparisons with normative samples of self-concept instruments. Findings consistently indicate that the gifted display higher general self-concepts than the norm groups.

Potential problems are created in using this procedure, however. The normative data provided in a particular test manual may be relevant to one group of school children from a specific school district, and therefore, may be of limited generalizability (Gambino & Rejskind, 1990; Shore, 1980).

Other research studies that did employ control groups for comparisons also report gifted children to have higher

levels of general self-concept. Coleman (1983) reported higher self-concepts for the gifted than disabled children or children of average ability. Lehman and Erdwins (1981), Mulcahey, Wilgosh and Peat (1990), and O'Such, Twyla, and Havertape (1979) have all documented gifted students as having higher general self-concepts than nongifted students from a control group.

Negative Findings. Having considered some of those studies which report higher self-concepts for the intellectually gifted, the following studies report contradictory findings. Bartell & Reynolds (1986), Bracken (1980), Dean (1977), and Miller (1972) have all documented research which suggests that self-concepts of academically gifted children do not differ significantly from those of children with average intelligence. Dean (1977) and Miller (1972) employed the Coopersmith Self-Esteem Inventory (Coopersmith, 1967) in their studies. Using a control group design in each case, findings indicated that gifted children demonstrated general self-concepts no different from nongifted control students.

Also, Bracken (1980) compared self-concepts of gifted elementary school children, to the norm sample of a self-report questionnaire. This questionnaire was developed and normed by the Institute for the Development of Educational Activities (Frieze, 1973). Results

demonstrated that gifted students' general self-concepts were not significantly different from those reported in the norm group.

Explanations of Contradictory Results

Measuring General Self-Concept. Another important issue to be addressed in these studies, is the types of instruments used to assess self-concept. For example, Gambino and Rejskind (1990) Karnes and Wherry (1981), and Ketcham and Snyder (1977) all used the Piers-Harris Childrens' Self-Concept Scale (Piers, 1984). As stated, results of these studies reported gifted students to have higher general self-concepts than norm groups, or nongifted comparison groups. However, studies by Carter (1978); Evans and Marken (1982) and Hansen and Hall (1985) using a variety of different instruments, indicated a lack of significant differences between groups on measures of self-concept. The question arises as to whether or not the type of instrument used in the collection of data will have any effect on the type of results that may be determined.

In a review of the Piers-Harris Childrens' Self-Concept Scale, Jeske (1985) stated that because of its psychometric soundness, and due to the fact that it was designed thoughtfully and cautiously, it is the best

available measure of self-concept for school-age children. Also, he strongly recommended it as a research tool. Similar reviews of the Coopersmith instrument, and various other measures of self-concept, stop short of making such directed and definitive statements (Peterson & Austin, 1985).

Social Comparison Theory. Social comparison theory may also explain contradictory findings. For example, research by Coleman (1983) assessed self-concept in mildly handicapped children from two distinct programs. The first was an instructional setting where the handicapped children were integrated with regular (non-handicapped) school children. The second was a segregated program where the handicapped children were grouped together. Results indicated that handicapped children reported higher self-concepts when grouped together than when grouped with regular school children.

Coleman (1983) used social comparison theory to explain these conclusions, by suggesting that the handicapped children were given the opportunity to interact with similar others, therefore, they were no longer stigmatized, resulting in a higher self-concept.

With regard to social comparison theory and gifted children however, one would expect that a segregated program might diminish self-concept. The gifted child

segregated for special instruction has left a setting where his or her abilities were above those of other children in the group, for a setting where their abilities are now only typical. Unlike the handicapped children, gifted children lost a particular status in moving to a homogeneous group. As a result, perceptions of one's self may diminish due to the new comparison group. This issue of social comparison theory and self-concept in gifted children is considered at length at a later section in this chapter.

Summary. The majority of studies support higher general self-concepts for gifted children in comparison to children from unselected groups. Issues of experimental design had significant effects upon the types of results determined in each study. A control group with whom to make comparisons, and a sound instrument for measuring self-concept are fundamental to the objective of achieving accurate results.

Domain-Specific Self-Concept and Gifted Children

Children form evaluations about themselves on several levels (Marsh, 1988). In addition to general feelings of self-worth, children also develop attitudes relating to more specific aspects of their personality. Physical appearance is an example of such an aspect. Social

acceptance among peers would be another. In effect, each area of a child's experience is believed to have a "concept of self" related to it (Marsh & Shavelson, 1985). This hypothesis has important implications to giftedness and social comparison theory.

A major limitation of many self-concept studies, is that they analyze only a total self-concept score (Janos, Fung, & Robinson, 1985; Schneider, 1987). Inferences are made concerning the global self-concept alone, despite the fact that more meaningful data relative to the various aspects of self-concept is readily available. A recent trend in gifted education examines these aspects, and assesses their relationships to other factors related to giftedness such as intelligence, setting, and peer relations.

The areas of general, academic, and social self-concept receive the most attention in this area of research. There are two main reasons theorists concentrate on these particular aspects. First, due to the long-standing misconception that gifted children suffer in their social relations with peers, social self-concept becomes a primary source of interest. Numerous studies have examined gifted children and social self-concept in an attempt to clarify this hypothesis of reduced social competence (Colangelo and Kelly, 1983; Cornell, et al, 1990; Kelly & Colangelo, 1984; Leroux,

1988 and Ross & Parker, 1980). Findings on this issue are inconsistent. Some researchers document positive social functioning for the gifted (Janos & Robinson, 1985; Schneider, 1987), whereas others report gifted children to have difficulties in social situations (Ross & Parker, 1980).

Secondly, academic superiority is accepted as a principal characteristic of gifted achievement. It is only natural that researchers would be interested in examining this aspect of self-concept in comparison to social standing, or in comparison to other populations.

As related to social comparison theory, issues of performance and setting become important correlates of domain-specific self-concept. The comparison group with whom a gifted child interacts is going to have different effects on each specific aspect of self-concept. For example, segregated gifted children compared to unselected children may suffer socially. In social interactions with nongifted students, the label of giftedness may carry with it a negative stigma. The term "nerd" or "bookworm" is often associated with the gifted child's abilities. On the other hand, academic self-concept may increase when compared to nongifted students. In this context, the gifted child's abilities are valued. As a result, self-concept relating to academic factors would be expected to increase.

Research Examples Favoring The Gifted. An in depth review of the literature on domain-specific self-concept and gifted children indicates that the majority of studies find gifted children to have higher academic self-concepts. Only one study reviewed reported the lack of significant differences between gifted and nongifted children on this factor.

Several researchers, most notably Byrne (1990); Coleman and Fults (1982, 1983, 1985); Colangelo and Pfleger, (1978), and Kelly and Colangelo, (1984), have worked extensively assessing academic self-concept in gifted children. Findings from these studies support the hypothesis that gifted children report higher academic self-concepts than those observed in average-ability youth. For example, Kelly and Colangelo (1984) using the Tennessee Self-Concept Scale (Fitts, 1965) and the Academic Self-Concept Scale (Brookover, Patterson & Thomas, 1962) conducted a study involving 266 students in grades 7 through 9. The sample was drawn from a large comprehensive high school and was subdivided according to level of IQ and achievement. Self, teacher, and parent ratings of each child were used in addition to the IQ and achievement scores to place each subject into one of three groups: (1) a gifted group, (2) a regular group, or (3) a special slow learning group.

Between-group comparisons indicated that those students placed in the gifted group demonstrated significantly higher academic self-concepts than either of the other two groups.

Overall findings of this particular study, and those others which support positive significant differences on academic and social aspects of self-concept (Byrne, 1990; Coleman & Fults 1982; 1983; 1985, Colangelo & Pfleger, 1978; and Kelly & Colangelo, 1984) are important for several reasons. First, they contribute to research supporting the hypothesis of a domain-specific self-concept. Secondly, they support the relationship between giftedness and high academic self-concept. Finally, those studies which find gifted children as having higher social self-concepts (Colangelo & Pfleger, 1978; and Kelly & Colangelo, 1984) present evidence against the hypothesis that gifted children suffer in their social relationships with others.

Negative Findings. In contrast to the above findings, a study conducted by Karnes and Wherry (1981) using the Piers-Harris scale reported no differences between segregated gifted children and a nongifted control group on domain-specific measures of self-concept. However, when comparing the gifted students' general self-concept to the standardized norm group of the Piers-Harris

instrument, gifted children reported significantly higher self-concepts. It was concluded from these findings that gifted children have significantly higher general self-concepts than their intellectually average counterparts.

In a more recent study, Janos, Fung and Robinson (1985) reported that gifted children evaluated themselves no differently on levels of general self-concept than nongifted children from the same school setting. Self-concept in this study was measured using self-report questionnaires developed by the authors for purposes of this design. As a result, reliability and validity issues are a major concern when generalizing their results to other gifted populations.

Summary. Similar to those findings discussed in relation to general self-concept, gifted children more often report significantly higher levels of academic and social self-concept when compared to students who are not identified as gifted. Factors such as achievement, setting, and IQ appear to be related to these conclusions and are considered at length in the following sections of this chapter.

Self-Concept, Levels of IQ and Achievement

According to earlier definitions, IQ was the principal characteristic necessary for identifying giftedness. In fact, the higher the IQ, the more likely it was that a particular individual was considered gifted (Terman & Oden, 1925). Recent definitions also recognize the significance of IQ in this identification process, but emphasize the importance of other characteristics as well. For example, Renzulli (1983) acknowledges the use of IQ in identifying gifted children and recognizes the relationship between this construct and other attributes that may contribute to giftedness. He suggests that IQ, coupled with task commitment and motivation, broaden a definition of giftedness beyond the areas dealing specifically with a child's academic-intellectual capability.

Studies focusing on the relationship between self-concept and giftedness use a variety of factors in defining what it means to be gifted. Some consider IQ alone (Coleman & Fults, 1982; 1985; Ketcham & Snyder, 1977, Rogers, Smith & Coleman, 1978 & Savicky, 1980); and others use IQ and achievement (Byrne, 1990; Kelly & Colangelo, 1984 & Leray, 1983). The discrepancies between these two approaches cast doubt on the generalizability of previous studies examining self-concept in gifted children.

By incorporating social comparison theory at this point, IQ becomes less of a factor in affecting one's self-concept. The theory states that self-evaluations are made by comparisons to others perceived to be similar in ability. In other words, evaluations are made using information related to performance or ability. This information must be accessible, and readily available to other members in the group. IQ is not a visible construct of one's ability or performance. Achievement is, however, especially in a school setting where the child interacts closely with other classmates. The following section considers research examining both variables as they relate to self-concept.

Research examining IQ and Self-Concept. There are few studies cited in the literature supporting the existence of a relationship between IQ and self-concept. One study, conducted by Coleman and Fults (1985), reported that gifted children from a special instructional program, and having a lower IQ (below 110), demonstrated significantly lower levels of self-concept than high IQ gifted children from the same program, regular program gifted children, or regular program nongifted school students. Replications of this design however did not determine systematic differences in self-concept. For example, Gambino and Rejskind (1990) reported that lower

IQ gifted students in their sample of 139 did not show a significant difference in self-concept scores when compared to high IQ gifted children before or after participation in a summer enrichment program.

Similarly, by conducting a median split procedure, Savicky (1980) assessed levels of self-concept in gifted children with IQS ranging from 115 to 146. The sample was divided into two groups. All those scoring 129 and below on a IQ measure were placed in a low IQ group. Those scoring 130 and above were placed in a high IQ group. No differences emerged on comparisons between groups on levels of self-concept. However, when analyzing the same groups divided by sex, results demonstrated that females reported a higher self-concept if they belonged to the high IQ category. A major limitation of this particular study was that only levels of general self-concept were examined, rather than investigating relationships between level of IQ and academic and social self-concept. Findings from these studies suggest little indication of a relationship between IQ and self-concept, at least with general self-concept. Further study is required in this area using domain-specific self-concept.

Research on Self-Concept and Achievement Level.

The research evidence supporting a relationship between achievement level and self-concept is stronger than that

reported in relation to IQ. However, results are still inconsistent.

Byrne (1990), in her investigations of self-concept amongst ability-tracked students, concluded that level of self-concept was significantly related to academic achievement and the ability-labelling process. Conclusions were based on relationships between high achievement and levels of academic self-concept. The authors make the assumption that high achievement, accompanied by a label of "gifted" or "bright" affords students higher status in the school context. This valued status results in an increased academic self-concept.

Other studies using gifted high school students and achievement level as a correlate to self-concept report similar findings (Kelly & Colangelo, 1984; LeRay, 1983; Mulcahey, Wilgosh & Peat, 1990, & Whitmore 1980). Consistent with Byrne (1990), these studies also report a relationship between school achievement and academic self-concept, rather than in the social or general domain.

Once again, results support social comparison theory. For example, gifted students in many of these samples are in a situation in which they may compare themselves socially with children who value their academic talents. As a result, that domain of self-concept that relates to academic ability is bound to increase.

In contrast, studies by Carter (1978) and Stopper (1979) found no significant correlations between self-concepts of gifted children and levels of achievement. However, neither of these studies assessed domain-specific aspects of self-concept. Once again, methodological issues may account for these discrepancies.

Gender Differences in Self-Concept

The number of studies dealing with gender differences in self-concept is relatively limited. Those that have considered this relationship report diverse findings. The majority of these studies assess samples that are between the ages of 8 and 11 years. This poses a potential problem with the generalization of results to other populations.

Gender Differences in Non-Gifted School Children.

In their discussions of nongifted school children, Petersen (1980) and Rosenberg (1979) report that sex differences in levels of self-concept may be masked or affected due to the onset of adolescence. Brutsaert (1990) agrees with this statement and suggests that puberty can have negative affects on self-concept of both males and females.

Moreover, Simmons and Blyth (1987) report that nongifted females tend to suffer a more pronounced lowering of self-esteem during adolescence than nongifted males.

Simmons and Rosenberg (1975) also detected lower general self-concept in adolescent females. They accredit this decrease in self-concept to the fact that, during adolescence, females begin to realize that traits valued in males are accorded higher status than those valued in females; they perceive themselves as receiving less favorable appraisals from others (Brutsaert, 1990). Hence, girls are not as contented with their sex-role as boys, and they develop a less positive attitude to being female than boys do toward being male. Finally, there is some evidence that girls' self-concepts are more sensitive than boys to environmental changes, such as entrance into junior high school (Simmons & Blyth, 1987; Marsh, 1989).

Gender Differences in Gifted School Children. The above discussion is based on research that detected decreased levels of self-concept in unselected school children during adolescence. However, none of those studies reported above assessed gifted populations. The following section discusses current research involving gender differences in levels of self-concept for gifted children.

Gambino and Rejskind (1990) reported that participation in a summer enrichment program attenuated existing gender differences on the anxiety scale of the Piers-Harris instrument. However, no other subscale differences were detected between sexes. Research by Coleman and Fults (1982) and Ross and Parker (1980) did not detect gender differences on measures of self-concept in the gifted samples they assessed using the Piers-Harris instrument.

There are, however a considerable number of studies assessing gifted children that did detect overall gender differences in levels of general self-concept. A study by Loeb and Jay (1987) contradicts findings reported by Brutsaert (1990) and Marsh (1988) that females report a decreased general self-concept in comparison to males. Using a sample of 125 gifted children and 102 regular program students, ages 9-12, it was reported that gifted females demonstrated significantly higher levels of self-concept than gifted males.

Ludwig and Cullinan (1984) suggest that for gifted girls, classroom success appears to be congruent with a positive self-image. Callahan (1980), in her discussion of gifted females, states that the traditional feminine ideal seems to involve being well-behaved, conscientious and obedient. This effort of striving to conform fosters higher levels of achievement.

Thus, due to social reinforcements, the achieving young female develops a positive sense of self-worth.

Other Factors Related to Gender Differences. Other aspects of education have been related to gender differences in levels of self-concept for gifted children. For example, Stopper (1979) using a self-report questionnaire reported that males attending the second, fourth, and sixth grades feel less secure about themselves than their female counterparts. In particular, grade 6 gifted males felt the least secure. Stopper (1979) explains her results by suggesting that teacher and parental expectations for gifted boys are not as high as they are for gifted girls in the earlier school grades. Similar to Callahan's findings (1980), Stopper suggests that elevated expectations for females are conducive to higher levels of achievement, thus, higher levels of self-concept. She further states that, because of social influences, gifted boys are more interested in physical activities than academic work. Had she taken her analysis one step further and compared the physical and social self-concept scores of boys to that of girls, her conclusions would have been considerably more meaningful and representative of current theoretical observations.

As discussed earlier, another aspect that would have

complimented many of these studies would have been consideration for the various types of programs gifted students attended. Program-type introduces a very important facet of the social relationship inherent in self-concept theory and is the next element to be discussed in this particular chapter.

Special Programming for Gifted Students and Self-Concept In Support of Integrated Settings. The term integrated in this context, refers to those instructional programs that combine gifted and nongifted students together in one setting. Theorists supporting this approach argue that gifted participants will be secure in their relationships with others. This impression is based largely on the belief that gifted children in the mainstream usually place at the top of the class academically, thus, providing them with less competition, ample attention, and positive feedback from other classmates and teachers (Weiss & Gallagher, 1986).

LeRay (1983) supports the above hypothesis by suggesting that self-concept is a personality construct formed largely by one's interpretations of success and failure. For example, the more often a particular student is rewarded for having been successful in a certain area, the more likely it is that his or her self-concept will increase.

Simply stated, "positive reinforcement is conducive to a positive sense of self-worth" (Whitmore, 1980, p.18).

In Support of Segregated Settings. Segregated, in context of this discussion, refers to a program in which gifted students are grouped homogeneously. Those supporting a segregated instructional method base their opinions on a different set of principles. This argument insists that the gifted child in a segregated setting will exhibit an increased sense of self-worth because the provided curriculum is designed to be much more stimulating. Also, the segregated gifted child is permitted to interact and associate with other students similar in ability. This is believed to foster a good basis of comparison between performances, hence, a positive sense of self-worth (Suls & Sanders, 1982).

Finally, advocates of segregated programs argue that the labeling and ability grouping process is in itself conducive to creating high levels of achievement (Byrne, 1990). Having been labeled and grouped as having high ability, segregated gifted children are believed to reflect expectations placed on them by achieving at an increased rate, thus, receiving the same positive reinforcements as the gifted child from the integrated setting.

Regardless of how each group attains positive reinforcement, both sides emphasize the positive relationship between levels of achievement and self-concept. In addition, both sides also contend that it is positive feedback, based on one's achievement level, that is conducive to increasing levels of self-concept.

An examination of research articles that evaluate various programs and their effects on self-concept shows discrepant findings. While some studies report a lack of program influence, others claim that participants' self-concepts are either enhanced or diminished by a particular program. Explanations for these inconsistencies may be found in social comparison theory. For example, do segregated gifted children actually incorporate positive attitudes from their social surroundings into their self-evaluations? An examination of current research on this topic may help answer this question.

Lack of Program Differences

A study by Maddux, Scheiber, and Bass (1982) examined levels of self-concept in 55 gifted students. Participants were in the fifth and sixth grades and were drawn from three different types of instructional programs: (a) totally segregated in a gifted class, (b) special pull-out students in which subjects attended

special pull-out classes for a certain period of time each day, and (c) no special conditions provided. Results showed no significant differences between groups on Piers-Harris measures of general self-concept.

A similar study by McQuilkin (1981) assessed fourth and fifth graders from four different types of programs. Groups included a totally segregated program by class, a group of special pull-out students, cluster groups, and regular program students with no special provisions. Once again, results demonstrated no significant differences between groups. This result is particularly interesting in that fifth grade students who had been experiencing the segregated program for at least one year also reported no differences in general self-concept, suggesting strongly that type of program has no negative effects on participants' self-concepts.

Other researchers that support lack of differences in self-concept between program types include Gambino and Rejskind (1990); Hultgren and Marquardt (1986); and Karnes and Wherry, (1981). Here too, authors raise the possibility that special programs neither enhance, nor diminish participants' self-concepts.

Detected Differences Between Programs

In contrast to those studies discussed above, there are those studies which have demonstrated at least partial

support for the fact that special class placements can enhance levels of self-concept in gifted children (Byrne, 1990; Janos & Robinson, 1985; Kelly & Colangelo, 1984 and Mulcahy, Wilgosh & Peat, 1990).

A recent study providing such an example was conducted by Byrne (1990). Using a very large sample of 1897 students, evaluations were conducted using two distinct instructional settings. The first was a special gifted population, segregated from regular school children. Participants in this group were identified as gifted using measures of IQ, academic achievement, and teacher recommendations. The second group consisted of regular program students, some of whom were high achieving but were not previously nor formally, identified as gifted.

Self-concept was assessed using two measures. The first was The Self-esteem Scale (SES; Rosenberg, 1965). This instrument is a 10-item scale based on a 4-point Likert-type format ranging from "strongly agree" to "strongly disagree". The second measurement was The Self-Concept of Ability Scale (Brookover, 1962) and reports a subjects self-concept based on academic factors. Very similar to the SES, this instrument contains 8-items based on a 5-point Likert-type scale.

Respondents are asked to rank their academic ability in comparison with others, on a scale from 1 ("I am the poorest") to 5 ("I am the best").

Interestingly, results indicated no significant differences between groups on measures of general or social self-concept. However, significant differences were detected between groups on measures of academic self-concept. In this particular case, gifted students participating in the specially segregated instructional program reported significantly higher academic self-concepts than all students participating in the control group. Byrne (1990) concludes that her findings may be related to two distinct factors. First, she acknowledges the fact that participation in a special program for gifted children may enhance levels of self-concept, especially academic self-concept. Second, she also argues the possibility that the labelling process itself can be credited with elevating levels of academic self-concept.

In an earlier study, Ketcham and Snyder (1977) assessed self-concepts of 148 highly intelligent children attending a special higher educational preparatory program. Subjects were drawn from seven randomly grouped classes in the second to fourth grades. The Piers-Harris instrument was used to collect self-concept scores and was administered two weeks after the program began. Results indicated that, regardless of levels of IQ, grade, sex or

achievement, all children demonstrated significantly higher general self-concept scores in comparison to the Piers-Harris norm sample. Researchers concluded that this particular program fostered a positive attitude among its participants.

Although the above conclusion may be accurate, the design of this particular study demonstrates weaknesses that may limit its results. For example, no self-concept pretest data was collected from subjects to determine what levels of self-concept existed prior to participation in the special program. Also, self-concept data that was collected, was done so only two weeks into the school year. Therefore, results are questionable simply due to the fact that two weeks may not permit sufficient time for any program to have an effect on its participants. These issues make the results of this study inconclusive.

Perhaps the incorporation of a matched control group, a collection of pretest data, and a posttest administration of the Piers-Harris test towards the end of the school year would have better served the objectives of this particular study.

Hansen and Hall (1985) examined the effects of a special program for gifted students: The Green Bay Gifted Students Institute Summer Program. Their sample included 37 gifted students ranging in age from 10 to 14 years. Using a pretest /posttest design, participants were

administered The Coopersmith Self-esteem Inventory and the Me Scale (Feldhusen & Kolloff, 1981) on the first and last days of the summer program.

Results indicated that only younger children (ages 10 to 12.5) reported significant gains on the Me Scale from the beginning to the end of the program. On the Coopersmith Self-esteem instrument however, all students reported significant gains on the posttest administration of the test suggesting that this particular program did have positive effects in elevating levels of self-concept in gifted children.

In summary, there is evidence to suggest that certain gifted programs can enhance levels of academic, and general self-concept. However, methodological issues complicate some of these findings and generalizations of their results should be conducted with caution. Also, no evidence was found to support the fact that special programs enhance social self-concept. This is an issue that requires further research.

Possible Negative Effects of Special Programming.

Having previously reviewed research on special programs that claim to have no effect on self-concept, and those which purport to enhance self-concept, the remaining section considers those studies which suggest special programming may diminish certain levels of self-concept.

As related to the theory of social comparisons, predicted results for these studies are based on the fact that segregated gifted children are placed into a group where their talents are now only typical. Previously, while in an integrated setting, they were unique in their abilities to achieve higher than their classmates.

Supporting this theory, landmark studies by Coleman and Fults (1982; 1985) reported that gifted children in segregated classrooms demonstrated significantly lower self-concept scores on the Piers-Harris instrument than gifted students participating in regular streamed classrooms. In fact, a five month follow-up study assessing self-concept in these same subjects reported that self-concept scores increased after having left the segregated program (Coleman & Fults, 1982). This result is particularly noteworthy in that no other study applied this method of a follow-up assessment. Replication of this technique under similar conditions would greatly enhance the credibility of findings.

In other research, Olszewski, Kulieke and Willis (1987) conducted a practical study to examine changes in self-concepts of gifted students over the course of an intensive summer program. Two groups of academically gifted junior high students (N=456) participated in two separate kinds of summer programs. The first program was characterized by a fast pace proficiency model of

instruction. Students were to study one high school-level honors course for five hours a day, five days a week for a three week period. The goal was for students to acquire proficiency in the subjects studied which included Algebra, American Studies, Literary Analysis, Creative Writing, Latin, Biology and Chemistry. There were social activities for the students in the evenings and on the week-ends such as field trips, sports events and dances.

The second program used in this study was also a three week summer program that was characterized by a "laboratory based, resource oriented, hands-on participatory instruction model" (Olszewski et Al, 1987, p. 292). Courses in genetics, ecology, energy, mathematics and computers were taught by teachers and Argon scientists. Emphasis in this program was placed on the acquisition of scientific investigative skills as well as content. This program contrasts with the previous one in that participants commuted from neighboring suburbs each day, rather than setting up residence for the duration of the program. As a result, opportunity for social activity between participants was limited.

Each subject was required to complete the Self-Perception Profile for Children (Harter, 1982, 1985) prior to the beginning of the program, on the first day of the program and on the last day of the program.

This is a 36-item paper and pencil instrument designed to be used with junior high aged students. It assesses six separate subscales of self-concept: scholastic competence, social acceptance, athletic competence, physical appearance, behavioral conduct and self-worth.

Results of this study showed significant decreases in several areas of self-concept over the three testing sessions for both groups. For the first program, although students did not show diminished global self-concept scores, they did report significant decreases in levels of self-concept of scholastic competence, social acceptance and athletic competence after having participated in the program. The second group reported lower global self-concept scores upon completion of the program than on either of the two previous testing sessions. Although mean scores on measures of social and athletic competence were not significantly lower than previous tests results for this group, they were diminished.

An analysis of the two groups demonstrated that the first program participants displayed a more positive sense of self-worth than those students enrolled in the second program. The authors accredit this discrepancy to the fact that Program One students were afforded the opportunity to socialize with classmates throughout the duration of the program. As for decreased scores on other levels of self-concept, they draw the conclusion that

scores diminished due to the fact that they were not interacting in a mainstream instructional setting. Their typical status of demonstrating high levels of ability in comparison to other classmates was removed upon being segregated with other high ability children, in effect, causing various measures of self-concept to decrease. Further conclusions drawn from these results suggested that specialized programming for gifted students can have damaging effects on certain levels of self-concept in gifted children. This hypothesis is consistent with that purported by Coleman and Fults (1985), based directly on aspects of social comparison theory.

A major limitation of this study however, was the assumption that all segregated programs are as intense in their curriculum instruction as that being investigated. To generalize results based on these samples to all specialized programs would be an over-generalization. Replications of this design, using many various types of special programs, in addition to nongifted control groups, would make it possible to generalize to other populations.

Social Comparison Theory in Giftedness Research

The literature reports a significant number of articles examining social comparison theory and its relationship to self-concept (Coleman & Fults 1982; 1983; 1985, Fults 1980, and Rodgers 1980).

As mentioned previously, this theory has important implications with regard to gifted children and the type of environment in which they interact. To exemplify segregated programs once again, these students are given the opportunity to interact with others similar in ability and performance. One would expect then, that such an environment would foster increased levels of self-concept due to the fact that social comparisons can be easily carried out. On the other hand, the Coleman and Fults argument regarding lower IQ gifted students suggests that, through a process of social comparisons, self-concept decreases for segregated gifted children because these children are being placed in a homogeneous setting, the gifted child's abilities are now only typical, whereas in an integrated setting they were high performing and therefore, very atypical and highly rewarded. The resultant change in peer group interactions usually brings about a diminished sense of general self-concept (Coleman & Fults, 1982).

Fults (1980) using social comparisons as a theoretical base reported lower self-concepts for segregated gifted children than children from the regular classroom. Similar results have been described by Rodgers (1979) who compared the self-concepts of elementary school gifted students enrolled in a one day per week Discovery class to those of children eligible for the program but

remained in regular classes. Across a nine-month interval, self-concept in the Discovery group decreased, while self-concept among the gifted students who remained in the regular program increased. There seems to be a definite relationship between children's self-concept and the type of setting in which they interact. Smith (1980) in a study similar to Rodgers (1979) reported lower self-concepts for specially programed (segregated) gifted students. Authors concluded that gifted children in the special programs evaluate themselves negatively through a process of social comparisons.

A research study that did favor special programming based on a social comparison theoretical framework was conducted by Coleman (1983). Interestingly, the design did not incorporate gifted children in the sample, rather, regular school children, mildly handicapped children from either partial or totally segregated settings, and regular program children suffering academic difficulties were used.

Using the Piers-Harris instrument, results indicated that mildly handicapped children placed in a totally segregated instructional setting reported higher self-concepts than only partially segregated handicapped children, or children suffering academic difficulties in the regular program. On comparisons between mildly handicapped segregated children and regular program

students, no significant differences were detected.

Coleman (1983) concludes that with regard to special programs and handicapped children, participants are moving from a heterogeneous environment, one where the label given them and their capabilities is not as highly valued as those of their classmates, to a homogeneous environment, where their special characteristics are shared mutually with all other classmates. When all other classmates are also handicapped, the stigma of being handicapped is removed and they are able to interact as equals. Researchers suggest that homogeneity in this case facilitates the social comparison process, manifesting itself in higher levels of self-concept.

In summary, the majority of research studies using a social comparison perspective assessing self-concept in special program gifted students reports diminished self-concepts for the gifted (Coleman & Fults 1982; 1985, Fults, 1980; Rodgers, 1979, and Smith, 1980). One study supports the use of a segregated instructional setting, but for handicapped children (Coleman, 1983).

Conclusions

Although the Piers-Harris instrument was used consistently throughout these social comparison studies, the majority of researchers used only the general self-concept score in reporting their results. It would be

useful to examine self-concept differences in these special populations with regard to other aspects of self-concept.

In view of these perspectives, and the issues of gender, IQ and achievement scores discussed earlier, one must conclude that a study of the gifted child's self-concept should incorporate several important characteristics. First, the methodology must employ an instrument sensitive to domain-specific aspects of self-concept such as academic, social, and physical. Secondly, when assessing effects of programs, the design must employ and assess a well-defined instructional program. A control group should be included to facilitate comparisons. Finally, the study should employ a theoretical framework, one that is empirically testable and offers a firm basis for results.

Statement of The Problem

The majority of studies examining self-concept in gifted children assess elementary school students between the fourth and sixth grades (ages 8-11). Although some studies examine high school students, there are relatively few in this particular area of research that investigate students in junior high school. Assessing this age group

is important so that previous theories regarding self-concept in gifted children can be tested and generalized to adolescents. Also, adolescence itself may have certain effects on self-concept not detected in studies using elementary school children.

Many studies are also lacking in that they do not employ a theoretical framework from which to generate hypotheses and analyze their findings. Theory driven experimentation is a relatively recent trend in educational research methods (Borg & Gall, 1989). Current theorists emphasize the importance of extending or refuting existing theories as a condition for advancing knowledge (Lakatos & Musgrave, 1968). Experiments that are not theory driven do not contribute to this operative process.

The present study is unique in that it includes several different variables under one design. Specifically, gender, program, IQ, and achievement levels are all considered in relation to self-concept. Studies discussed above indicate the relevance of these factors in relation to levels of general self-concept alone. The present study also considers these variables relative to other facets of self-concept --specifically, academic and social.

Through the use of a comparison group, this study permits gifted subjects' scores on the self-concept

instrument to be compared to other students from the same environment rather than from the normative sample provided in the test manual. This extends the generalizability of findings.

The gifted sample examined in this study is part of a large comprehensive high school. Participants are segregated for academic instruction alone. The objectives of the program attempt to maximize educational opportunities for its participants, while at the same time, emphasize their social position as members of a larger school body. A more detailed account of this program, and its participants is located in the following chapter under the **Subjects** sub-heading.

Based on the type of program involved, and the theory of social comparisons, we make the prediction that the specially segregated gifted students (TAG) will report self-concept scores no different from those reported by their regular program peers. In relation to previous research, we also predict a lack of significant differences between sexes on measures of general and social self-concept. However, TAG program females are expected to report significantly higher academic self-concepts than other participants. Gifted children scoring highly on measures of achievement and IQ are expected to demonstrate increased levels of self-concept when compared to TAG students scoring lower on these measures.

Research Hypotheses

Three research hypotheses were formulated and examined in the present study. The first hypothesis was based on previous research which assesses self-concept in gifted children participating in special programs. The remaining hypotheses are concerned with effects of gender differences, levels of IQ, and achievement on self-concept. Each is discussed in relation to previous research and social comparison theory.

Hypothesis 1: As measured on the Piers-Harris instrument, Talented and Gifted (TAG) students (grades 7 and 8) will report no significant differences on measures of general, academic and social self-concept when compared to students enrolled in the regular program.

TAG students in this sample are participating in a homogeneous group, yet they are given the opportunity to interact with other regular school children. Social comparison theory emphasizes the importance of other people when making self-evaluations. Further, the theory contends that given the choice between similar or dissimilar others, children are more likely to choose similar others when making comparisons in this self-evaluation process. Given that this occurs, TAG students in this sample will choose other TAG students for comparisons. Under the same principle, regular program

students will compare themselves to other regular program students. Although students within each program are able to interact with other students, they choose others from the same group for comparisons in order to make self-evaluations. This process fosters normal levels of self-concept in each group. As a result, differences between TAG students and regular program students are not expected to emerge.

Hypothesis 2: As measured on the Piers-Harris scale, no significant differences are expected to emerge between genders on measures of **general** and **social** self-concept. However, a gender by program interaction is predicted for measures of academic self-concept. TAG females are predicted to report significantly higher scores on measures of **academic** self-concept than TAG males and all subjects in the regular program.

The above hypothesis predicts no significant differences between males and females will emerge on measures of general and social self-concept. This expectation is based on several factors. Simmons and Rosenberg (1975) and Simmons and Blyth (1987) contend that nongifted females suffer a more pronounced lowering of self-concept during adolescence in comparison to males. Research focusing specifically on gifted populations

however, does not support this statement. The general consensus in this area is that both males and females demonstrate equally high levels of self-concept. As a result, gender differences between programs will cancel each other out on measures of general and social self-concept.

With regard to academic self-concept however, there is data to support the hypothesis that gifted females relate high achievement levels with a sense of higher self-regard in academic areas (Ludwig & Cullinan, 1984; Skaalvik & Rankin, 1990). As a result, academic self-concept is expected to increase for TAG females to a level significantly higher than that reported by all other participants.

Hypothesis 3 (A): As measured on the Piers-Harris scale, TAG students scoring at or above a group median on measures of IQ are expected to report significantly higher scores of general, academic and social self-concept than TAG students who scored below the median IQ.

Hypothesis 3 (B): TAG students scoring at or above a group median **achievement** score are expected to report significantly higher general, academic and social self-concept scores than TAG students who scored below the median achievement score.

These predictions are based upon two important factors: (1) The the theory of social comparisons, and (2) previous studies examining self-concept in segregated gifted children.

Social comparison theory discusses the relevance of other people and how they perform when making self-evaluations. As discussed previously, gifted children when segregated for special instruction are placed into a new setting where their talents are no longer unique. The other children with whom they now interact are also special. In effect, they are placed in a homogeneous group and the individual attention and higher status they at one time received from teachers and classmates no longer exists. In particular, the segregated gifted child who scores lower on an intelligence test than some of his or her classmates can be expected to report even lower levels of self-concept. Because they compare themselves to children who perform at a higher level than they do, self-concept diminishes. Evidence in support of this theory is provided once again by Coleman and Fults (1982, 1985). They report that those children most likely to demonstrate decreased levels of self-concept were segregated gifted children determined to be in a low IQ category.

Hypothesis 3B uses a median-split achievement score. This hypohesis is based upon the same principles of social

comparison theory as that reported for the median-split IQ analysis. However, we question the use of IQ as a measure of performance. IQ is an abstract construct, informative only when compared to normative samples based on similar standards. Achievement, on the other hand, is performance information relevant to a specific setting. It is also information that is available to other people. Therefore, it is expected to more readily reflect the relationship between domain specific self-concept and performance.

Summary. To summarize the above hypotheses, we make the predictions that TAG and regular students in this particular sample will report no differences on measures of self-concept when compared to one another. However, TAG students, when compared to other TAG students as based on median IQ and achievement scores will report lower levels of self-concept if they fell below the median point, than if they had scored at or above the median. Finally, we make the prediction that TAG females will report higher levels of academic self-concept than TAG males, or all students in the regular program. No differences were expected to emerge between genders on measures of general or social self-concept.

CHAPTER II

Method

Overview

The entire sample was drawn from a large high school on the south shore of Montreal. This school was ideal for the particular study due to the fact that a complete gifted program is in operation for all grade levels (Secondary I through V). Seventh and eighth grade students (secondary I, and II) from both programs were selected for analysis in this study.

These grades were chosen specifically for two reasons. First, they are under the same administrative cycle within the school timetable. Sharing the same time cycle facilitated the administration of group tests during the data collection procedure. Secondly, previous research assessing self-concept in gifted children uses elementary school age children, or young adults. In order to accurately assess hypotheses regarding adolescence and self-concept, junior high students were selected as this is when the onset of adolescence is believed to occur most frequently (Miller, 1983).

A control group was used in order to facilitate comparisons between groups, and to increase the

generalizability of results. IQ measures and current achievement marks were used to divide the sample into groups for self-concept analysis. The Piers-Harris test was used to assess self-concept. Analyses were carried out using descriptive statistics, along with two and three-way factorial ANOVA procedures.

Design

TAG and Comparison Groups

Two groups were formed for the initial analysis: TAG students (Talented and Gifted) and regular program students from the seventh and eighth grades. The TAG students acted as the experimental group and regular program students formed a comparison group. Critical to this particular study is the fact that the experimental group had been previously identified as gifted under school board policy and were functioning as a separate group under a gifted criteria both in a social and academic manner in relation to the control group assigned for comparisons.

In addition to collecting students' academic achievement marks, two standardized tests were also administered, one for IQ, the other to assess self-concept. All participants received both measures.

A statistical analysis was conducted for each comparison using two, and three-way analysis of variance procedures.

Median-Split Groups. In the TAG sample alone, IQ and achievement scores were ranked in ascending order to determine median scores for each variable. Once the medians had been calculated, the TAG students were divided through a median split procedure. All those scoring at or above the median IQ were placed in a high group. All those scoring below were placed in a low group. The same procedure was conducted for achievement scores. Comparisons were then conducted comparing below median TAG students to those scoring above on dependent measures of general, academic, and social self-concept.

Subjects

The TAG Program. The TAG program is a five year program. Although highly academic in its concentration, it does emphasize significant attention towards student interests and curiosities in other aspects of school life. Referred to by its principal as a "school within a school", TAG students are able to experience considerable interaction with regular program peers.

Total Sample. Subjects were 85 seventh and eighth grade students, 40 of whom participated in a segregated

TAG program. The remaining 45 were drawn from regular-stream seventh and eighth grade classes. All students attended the same large comprehensive high school near Montreal. The school was a district high school and enrolled students from several feeder schools located in nearby communities. Participants in both the experimental and control groups were from predominantly suburban, middle-class backgrounds and were of varied ethnic origin.

Table 1 outlines the sample divided by grade, program and gender. Subjects were solicited for participation through the school principal using parental consent forms. To provide a sample with an ethnic distribution similar to those students registered in the seventh and eighth grade TAG classes, seventh and eighth-grade classes from the regular school program were selected in conjunction with the TAG principal. All students were then issued parental consent forms to be returned to their home room teachers. Each consent form was accompanied by a letter explaining the proposed research and the role of each potential participant.

Achievement scores, and scores from a standardized IQ measure were collected and analyzed in comparison to various levels of self-concept. The mean IQ on the Otis-Lennon School Ability Test (Otis & Lennon, 1979) for the entire sample was 114.42, with a standard deviation of 13.45. The mean IQ for the TAG group was 123.58 with a

Table 1

Distribution of Subjects

TAG Program

Grade	Male	Female	Total
Grade seven	n = 8	n = 12	n = 20
Grade Eight	n = 10	n = 10	n = 20
Total	n = 18	n = 22	n = 40

Regular Program

Grade	Male	Female	Total
Grade seven	n = 7	n = 21	n = 28
Grade Eight	n = 9	n = 8	n = 17
Total	n = 16	n = 29	n = 45

standard deviation of 10.65. Finally, the mean IQ for regular students, or the control group was 106.29 with a standard deviation of 9.26. Mean achievement scores ranged from 74.03 for the control group, to 83.57 for the TAG group. The entire sample mean was 78.52 with a standard deviation of 7.86. Achievement scores were based on averages of most recent academic performance.

Subject Attrition. There were 135 consent forms originally distributed. Of that number, 96 students returned permission sheets to their home room teachers. The final sample used in the analysis consisted of 85 participants.

Subjects were retained in the study if Piers-Harris data was available for each participant, as well as scores from the Otis-Lennon School Ability Test and a complete record of current course averages. Across the group, attrition was due to absenteeism on one or more of the testing days or incomplete standardized test reports.

Identifying Students For TAG Participation. Students attending the TAG program are admitted on the basis of several factors. Initially, sixth grade students in various feeder schools are selected based on teacher reports, academic achievement, parental and student interests. Towards the completion of sixth grade,

prospective students are invited to take the Canadian Cognitive Abilities Test. This test is a general intelligence test involving reasoning, problem solving, and concept formation tasks. Each of these tasks are based on verbal and performance levels of ability. Students that score above the 75th percentile on this test are then contacted to complete further admission requirements. Subsequently, parents of these selected children are asked to complete an inventory of their child's apparent interests and skills as evidenced around the home. The students themselves are asked to complete a personal interest file, and, finally, the grade six teachers are asked for a statement of student aptitude, talent expression, and overall impressions (Menke, 1990). All of this information is then presented to an admissions committee. Once admitted to the program, students are administered the WISC-R, the Gates-McGinitie, and the Canadian Test of Basic Skills. This completes the battery of standardized tests administered to each student.

Measures

Measures for this particular study were chosen so that self-concept, IQ, and achievement scores could be collected quickly and efficiently for the entire group. Standardized tests were used to obtain IQ and self-concept

scores. These instruments are described in detail below. Each student's achievement was determined from term marks, collected and calculated by the TAG principal.

Piers-Harris Children's Self-concept Scale

The Piers-Harris test, subtitled "The Way I Feel About Myself" (Appendix A) is a self-report instrument designed to accurately assess levels of self-concept in adolescents, as well as earlier school age children. This particular test was chosen to measure self concept for several reasons. Primarily, it was chosen because it measures the multi-dimensional aspects of self-concept: Results offer more than a single "global" or "general" self-concept score. The test is also easy to administer and it has been used frequently as a research tool in many other studies regarding self-concept in gifted children. Finally, it is appropriate for this particular age range.

The Piers-Harris scale consists of 80 declarative statements to which the respondents indicate whether the items describe the way they feel about themselves (Appendix A). Approximately half the items are worded positively and half negatively to reduce the possibility of response-bias.

Scores can reach as high as 80 on the self-concept index, with higher scores reflecting a more positive self-concept. The overall assessment of self-concept is

represented by three summarized scores: total score, percentile score, and an overall stanine score. To provide for more detailed interpretations, the Piers-Harris can also be analyzed in terms of six "cluster" scores: Behavior (BEH), Intellectual and School Status (INT), Physical Appearance and Attributes (PHY), Anxiety (ANX), Popularity (POP), and Happiness and Satisfaction (HAP). Academic self-concept is determined by examining scores on the INT subscale for a particular subject. The INT subscale is considered an accurate measure of self-concept as it relates to issues surrounding school and academic performance (Piers 1984). Social self-concept is derived by assessing scores on the POP subscale for a subject. Samples of these particular subscales are presented in **Appendix B** along with a scoring key for each item.

Similar to the total self-concept score, responses on the subscales are scored in the direction of positive self-concept. Higher scores reflect more positive levels of self-concept within each domain. For example, on the anxiety subscale, a high score will indicate low anxiety. On the Intellectual and school status subscale, a high score is indicative of a positive self-concept towards school status and academic concerns. As can be seen in **Appendix B**, some items load significantly on more than one subscale, while others do not load on any of the

subscales. Consequently, the sum total of subscale scores may, or may not, provide a sum equal to the total self-concept score.

Reliability. The Piers-Harris instrument has been found to be highly reliable. Test-retest reliability coefficients range from .59 to .96 (Shavelson & Bolus, 1982). Internal consistency estimates of the 80-item scale have also been found to be generally high. An alpha of .90 has been reported by Winne, Marx and Taylor (1977). Lefley (1974) determined a split-half reliability of .91 based on a sample of American Indian children. Coleman and Fults (1983) have reported nine-month temporal stability coefficients ranging from .85 to .93 with a group of gifted students. These figures compare favorably to other instruments used to measure self-concept in children and adolescents (Piers, 1984).

Stable correlations of the Piers-Harris total score to each of the cluster scales have also been demonstrated. Correlation coefficients range from .63 to .78. Inter-relatedness among the cluster scales has also been reported. Correlations range from .21 (Physical Appearance and Attributes with Behavior) to .59 (Physical Appearance and Attributes with Intellectual and School Status).

These results suggest that the measure does assess both global, as well as specific domains of self-concept (Piers, 1984).

Validity. A number of validity studies have also been conducted on the Piers-Harris test. Correlation coefficients for this measure range in scale from .40 to .85 when compared to the Coopersmith Self-esteem inventory (Coopersmith, 1967). Bills (1975) has reported a coefficient of .41 between the Piers-Harris and Bills Index of Adjustment and Values test. These scores also support validity of the Piers-Harris in assessing a global self-concept.

In summary, the Piers-Harris is reported to offer a valid assessment of how children see themselves on several levels of basic personality and social functioning (Piers, 1984).

The Otis-Lennon School Ability Test

The Otis-Lennon School Ability Test (Otis & Lennon, 1979) is a group IQ test designed to measure abilities necessary to acquire the desired academic results of a formal education. In this particular case, the test was administered because previous standardized IQ measures that were used in identifying the TAG students were not attainable for purposes of this study. In addition, the

control group was never previously administered standardized tests as were the TAG students, therefore, comparisons would not have been possible between the two groups.

The School Ability Test is a revised version of the original Otis-Lennon Mental ability test (Otis & Lennon, 1967). The revised series seeks to serve the same purposes as the earlier editions. It measures the same attributes, utilizing largely the same psychometric approach and the same general conceptualization of the nature of the ability being measured. The change is intended to reflect more exactly the purposes for which the tests are overwhelmingly used: to assess examinees' ability to cope successfully with school learning tasks, to classify them for school learning functions, and to evaluate their achievement in relation to the talents they bring to school learning situations.

Emphasis of the school ability test is placed primarily on measuring a students "verbal-educational" ability through a variety of tasks that call for the application of several processes to verbal, quantitative and pictorial content (Otis & Lennon, 1979). The school ability test is arranged in a five level series that is designed for the testing of students in grades one through 12. Each level has two parallel forms, R and S.

The test consists of 80 items arranged in order of increasing difficulty. A single administration of the test takes 45 minutes. A single total or raw score is used to determine a **School Ability Index (SAI)** or IQ score. The SAI is derived in the same manner and has the same statistical properties as the IQ -a mean value of 100 and a standard deviation of 16 as drawn from the normative sample for unselected groups.

Reliability. Reliability studies for the Otis-Lennon have consistently revealed coefficients between .91 and .95, depending on whether split-half, Kuder-Richardson, or alternate form procedures have been used (Otis & Lennon, 1977). Test-retest coefficients over a six month period have yielded coefficients ranging from .84 to .92.

Validity. Validity studies have indicated correlations from .40 to .60 with teacher grades in selected school populations for grades 1, 3, 4, and 6. Coefficients of correlation range from .51 to .86 with the California Achievement Tests for grades 3, 6, 9, and 12; and from .71 to .94 for the Iowa Test of Basic Skills for grades 3, 7, and 8 (Otis & Lennon, 1977).

Achievement Scores

Achievement scores in this study refer to students' average academic marks across all courses. Averages marks were listed as percentages, and were provided for all participants by the TAG program director, in conjunction with regular program administration.

Dividing the Sample Through a Median-Split. IQ scores from the TAG group ranged from 102 to 145. Typically, an IQ of approximately 120-130 is used in defining a gifted sample as based on IQ. However, from a social comparison perspective, to divide a sample based on levels of achievement and IQ for purposes of research, it is necessary to divide that group in context to itself. The median point for this distribution of IQ scores is 126, and the median achievement score is 84.0. These scores were used as cut-off points in defining high and low groups for this particular gifted sample.

Those TAG students that demonstrated an IQ at or above the median IQ score (126) were placed in a high IQ category (n=21). All those who fell below this level, were placed in a low IQ category (n=19). Similarly, those demonstrating achievement marks (an average mark in current course work) above the sample median achievement score (84.0) were placed in a high achievement category (n=20), while all those scoring below this particular

level were placed in a low achievement category (n=20).

Procedure

Consent forms and information letters were drawn up and presented to the school administration. Once they had been approved by school personnel, 135 of them were distributed to potential students in four junior high classrooms from both TAG and regular programs. After consent forms were returned, and parental permission was granted, each of the two tests were administered to participants from each group. Both tests were administered by the experimenter over a one week period. The tests were completed in one sitting for each grade. The Otis-Lennon School Ability test was administered first, followed by the Piers-Harris Children's Self-Concept Scale. Standardized procedures outlined in the instruction manuals were followed during the administration of both tests.

For the Otis-Lennon test, Subjects were informed that they were about to take a test which showed how well they were able to solve different types of problems. Students were given 45 minutes to complete the test.

All students were informed that their responses would remain strictly confidential and their results would in no way be counted towards their regular school marks.

Prior to administering the Piers-Harris test, students were again informed that all answers would remain confidential and that results would not affect their academic record. Students were also encouraged to answer truthfully and to circle either yes or no for all items. Finally, the experimenter assured the class that he could be consulted for further clarification on any of the scale items.

Data Analysis

The data were analyzed using the SPSS-X statistical package. Differences between children in the TAG program and those in the control group on measures of general, academic and social self-concept were assessed by a series of two-way and three-way analyses of variance. Similar procedures were performed on the same dependent variables using Gender, IQ and achievement as independent variables. The level of significance was set at .05 for all analyses.

CHAPTER III

Results

This chapter presents results for each research hypothesis. Grades were collapsed for the following analyses after a series of oneway anova procedures were conducted for effects of grade on self-concept (F (1, 84) = .031, p = .860). The results were not significant, thus permitting each group to be collapsed by grade in each of the proposed hypotheses.

Hypothesis One

It was predicted that TAG students from seventh and eighth grade classes would report no significant differences on **general, academic** and **social** self-concept scores when compared to students enrolled in the regular program.

Analyses of variance for effects of program (TAG and regular), and gender (male and female) on each of general, academic, and social self-concept were conducted to test this hypothesis.

General Self-Concept. This section of the hypothesis was supported. A descriptive analysis between group means

indicates that TAG students in this study demonstrated a mean general self-concept score slightly higher than that reported by the regular group (Table 2). However, results of the analysis of variance indicate that this difference is not significant. Although a significant overall main effect for the influence of program and gender on general self-concept was demonstrated, neither program nor gender achieved a significant main effect independently. In addition, there were no significant interactions between these variables (Table 3).

This result suggests that both variables have an additive effect on general self-concept. However, when program alone is considered, TAG students' scores on measures of general self-concept are not significantly different from those reported by regular-program students. Therefore, the hypothesis that TAG students would report no significant differences on general self-concept scores when compared to regular program students is supported.

Social Self-Concept. This section of the hypothesis is also supported. TAG students once again demonstrated a higher mean score on social self-concept than did regular program students (Table 2). However, results of the analysis of variance indicate that there were no significant differences between TAG and regular program students, nor between males and females in this

Table 2

Descriptive Statistics for Piers-Harris Scores by Group

	General Self-Concept		Academic Self-Concept		Social Self-Concept	
Group	M	SD	M	SD	M	SD
TAG (n=40)	58.40	10.03	13.20	3.11	9.03	2.03
TAG Female (n=18)	60.86	10.01	13.68	3.87	9.41	2.07
TAG Male (n=22)	55.39	11.40	12.61	3.77	8.56	1.54
REG (n=45)	53.62	11.96	10.82	3.70	8.73	2.17
Reg Female (n=29)	55.94	10.03	11.50	2.20	8.75	2.15
Reg Male (n=16)	52.34	10.42	10.45	3.44	8.72	2.34
Total Males (n=47)	53.54	10.74	11.28	3.20	8.66	2.33

Table 2 (Cont.)

Descriptive Statistics for Piers-Harris Scores by Group

	General Self-Concept		Academic Self-Concept		Social Self-Concept	
Group	M	SD	M	SD	M	SD
Total Females (n=38)	58.84	11.40	12.76	3.97	9.13	1.76
TAG Above IQ (n=21)	60.59	10.10	14.00	2.93	8.86	2.22
TAG Below IQ (n=19)	55.72	11.27	12.22	3.61	9.22	1.98
TAG Above Achiev. (n=20)	59.50	10.52	13.42	2.90	8.68	2.21
TAG below Achiev. (n=20)	58.48	11.70	13.00	3.71	9.33	1.92
Total Sample (N=85)	55.90	11.29	11.94	3.62	8.87	2.10

Table 3

Analysis of Variance of Piers-Harris Scores by Program and Gender

Source of Variance	df	Sum of Squares	Mean Squares	F Ratio	p
		GENERAL SELF-CONCEPT			
Main Effects	**2**	**895.33**	**447.66**	**3.71**	**.029**
Program	1	309.81	309.81	2.56	.113
Gender	1	411.93	411.93	3.41	.068
Interactions	1	17.89	17.89	.15	.701
Residual	81	9786.36	120.82		
		ACADEMIC SELF-CONCEPT			
Main Effects	**2**	**142.48**	**71.24**	**6.02**	**.004**
Program	**1**	**96.06**	**96.06**	**8.12**	**.006**
Gender	1	22.75	22.75	1.92	.169
Interactions	1	.02	.02	.01	.990
Residual	81	958.22	11.83		
		SOCIAL SELF-CONCEPT			
Main Effects	2	5.56	2.78	.62	.538
Program	1	.88	.88	.19	.658
Gender	1	3.76	3.76	.84	.361
Interactions	1	3.46	3.46	.77	.381
Residual	81	360.56	4.54		

particular sample (Table 3).

These findings permit an acceptance of the proposed hypothesis that TAG students would report social self-concept scores which are not significantly different than those reported by students in the regular program.

Academic Self-Concept. The final portion of this hypothesis however, was not supported. TAG students reported higher academic self-concept scores than did regular program students in this particular sample. Results of the analysis of variance in Table 3 demonstrate a significant main effect for program on academic self-concept. The descriptive statistics in Table 2 indicate that TAG students consistently rated themselves higher on the Intellectual and School Status (academic self-concept) subscale than did regular program students.

Hypothesis Two

It was predicted that differences in general and social self-concept between each gender in this sample would not be significantly different. However, females from the TAG program were expected to report significantly higher scores on measures of academic self-concept than all other participants. This hypothesis was tested using analyses of variance for effects of program, and gender on general, social, and academic self-concept.

General Self-Concept. There was only partial support for this hypothesis. Means shown in Table 2 indicate that females overall, scored higher than males on measures of general self-concept. However, results from the analysis of variance for the effects of gender and program on general self-concept indicate that this difference is not significant (Table 3). Although a significant overall main effect was determined, neither gender nor program effected participant's reports of general self-concept independently. Therefore, findings support the hypothesis that males and females from this sample, would not report significant differences on measures of general self-concept.

Social Self-Concept. The results from the analysis of variance (Table 3) also demonstrate a lack of significant gender differences on measures of social self-concept. Once again, females reported a higher mean score than males (Table 2) but differences were not significant. Therefore, the hypothesis that gender differences on measures of social self-concept would not be significant is also supported.

Academic Self-Concept. Finally, results of the analysis of variance for the effects of program and gender on measures of academic self-concept indicate a

significant main effect for program but not gender. In addition, there were no significant interactions between gender and program. Although TAG females reported a higher mean score on academic self-concept than all other participants (Table 2), the differences were not significant. Results of the analysis of variance in Table 3 indicate that TAG students overall demonstrated a significantly higher academic self-concept than regular students, nevertheless, TAG females alone do not report significantly higher academic self-concepts than other students in this sample. These findings lead to the rejection of the hypothesis that TAG females would score significantly higher on measures of academic self-concept than other participants.

Hypothesis Three (A)

The third hypothesis addressed the influence of intelligence and achievement on TAG students' general, academic and, social self-concepts. It was predicted that TAG students scoring at or above the median-split on measures of IQ would demonstrate significantly higher general, academic and social self-concept scores than TAG students who scored below the median IQ.

Hypothesis Three (B)

Parallel predictions were made for TAG students using a median-split achievement score. Those TAG students scoring at or above a median split achievement score were expected to report significantly higher scores on measures of **general, academic** and **social** self-concept than TAG students who scored below the median achievement score.

Determining a median-split

Median-split scores for TAG IQ and achievement were calculated using an SPSS-X statistical procedure for histograms and descriptive statistics. The median IQ score was 126. There were 21 students scoring at or above this median and 19 scoring below. For achievement scores, the median was 84.0 with 20 subjects scoring at or above and 20 scoring below.

General, Academic and Social Self-Concept. The results do not support the above hypotheses. On measures of **general, academic** and **social** self-concept, students in the TAG program who scored at or above the median IQ demonstrated self-concept scores that **were not** significantly different than TAG students who scored below the median IQ.

As shown in **Table 2**, TAG means for the above-median IQ and achievement scores are higher than those reported by below-median TAG students. However, the results of the analyses of variance for the effects of IQ and achievement on general, academic and social self-concept scores (**Table 4**) indicate a lack of significance on each of these comparisons. In addition, no significant interactions were determined between IQ, achievement, and program. Therefore, because program effects were not significant, findings lead to the **rejection** of the hypothesis that TAG students at or above the median IQ and achievement scores would report higher **general, academic** and **social** self-concepts than TAG students scoring below these median points. As a result, hypotheses 3A and 3B are rejected.

Summary

Three levels of self-concept, specifically general, academic, and social were used as the dependent measures in this study. Using a quasi-experimental design, the effects of program (TAG and regular), gender (male, female), IQ (TAG students only), and Achievement levels (TAG students only) on each of general, academic and social self-concept were investigated. Comparisons were conducted using descriptive statistics, and a series of 2-way and 3-way anovas.

Table 4

Analysis of Variance of TAG Piers-Harris Scores by IQ and Achievement Level

Source of Variance	df	Sum of Squares	Mean Squares	F Ratio	p
		GENERAL SELF-CONCEPT			
Main Effects	2	275.65	187.83	1.36	.269
IQ	1	275.39	275.39	2.72	.107
Achievement	1	40.98	40.98	.41	.528
Interactions	1	8.45	8.45	.08	.774
Residual	36	3637.50	101.04		
		ACADEMIC SELF-CONCEPT			
Main Effects	2	31.80	15.90	1.65	.206
IQ	1	30.03	30.03	3.12	.086
Achievement	1	.51	.51	.05	.819
Interactions	1	.27	.27	.03	.866
Residual	36	346.32	9.62		
		SOCIAL SELF-CONCEPT			
Main Effects	2	4.38	2.19	.51	.608
IQ	1	.18	.18	.04	.840
Achievement	1	3.11	3.11	.77	.403
Interactions	1	.43	.43	.10	.755
Residual	36	156.16	4.34		

Significant differences were not observed on measures of general and social self-concept between each program. These findings were anticipated. However, the results indicated that TAG students overall demonstrated significantly higher academic self-concept scores than did regular program students. These results are contrary to the hypothesis that TAG students would demonstrate no significant differences on academic self-concept scores than students in the regular program.

No gender differences were observed on measures of general, academic or social self-concept. These findings were only partially anticipated. It was expected that no significant differences would emerge between males and females in this sample on measures of general and social self-concept. However, females from the TAG program were predicted to report significantly higher academic self-concepts than all other students in the sample. Findings did not support this hypothesis.

Investigations for the effect of IQ and achievement on TAG students' self-concepts indicated that students who scored at or above the median-split score on measures of IQ and achievement demonstrated general, academic and social self-concept scores that were not significantly different from those reported by TAG students scoring below a median point on each of these factors. This finding was not anticipated. It was predicted that TAG

students scoring at or above these median scores would report significantly higher self-concept scores. Therefore, findings for hypotheses 3A, and 3B are in the opposite direction of that expected. The implications of these findings plus those reported previously, are discussed in the following chapter in relation to social comparison theory and self-concept in general.

Chapter IV

Discussion and Conclusion

Review of Study

This study investigated self-concept in gifted and regular school children. Specifically, levels of general, academic and social self-concept were considered in relation to a particular type of instructional program. Junior high classes were selected from a TAG program and compared to junior high classes from a regular nongifted setting in the same school.

Discussion of Hypotheses

Hypothesis One: Program Differences and Domain Specific Self-Concept.

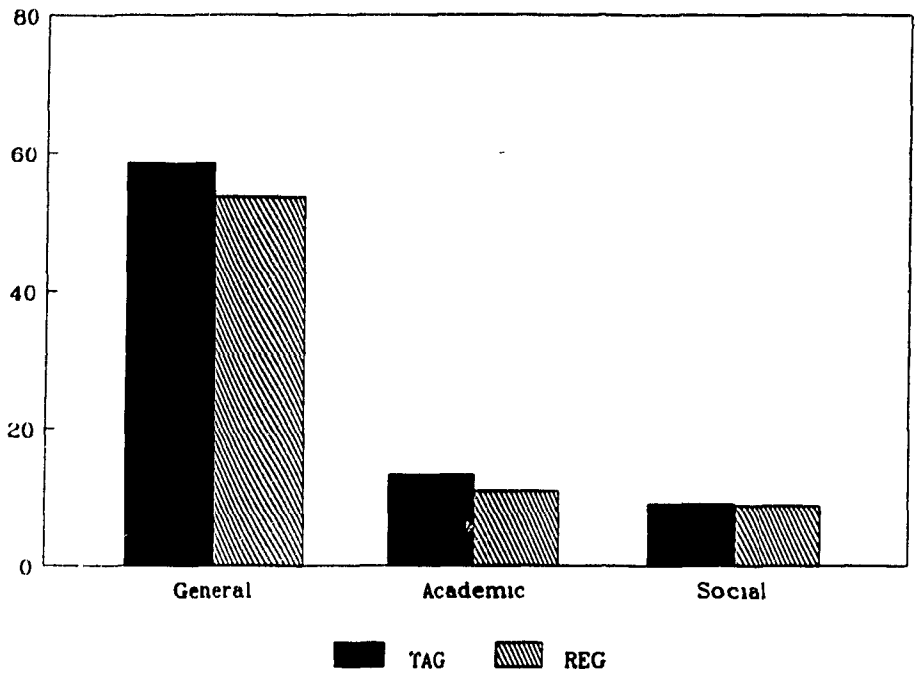
It was supported that no significant differences would emerge between TAG students and regular program students on measures of general and social self-concept. However, TAG students reported an academic self-concept score significantly higher than that reported by students in the regular program. This particular finding was not anticipated.

Findings relating to general and social self-concept do not conform with those reported in previous studies. Coleman and Fults 1982, 1985; Rodgers, 1980; Stopper,

1979; and Ross and Parker, 1980 all concluded that special program gifted students suffer decreased levels of general and social self-concept when compared to students participating in a regular program. Findings from the present study do not support these conclusions. Rather, they indicate that evaluations of self-concept by the TAG students is in no way negatively affected by the special program in which they are participating. In fact, TAG students from this sample report higher group means on all three measures of self-concept when compared to the control group (Fig. 1).

The fact that TAG students are permitted time to participate in other school activities with regular program students is presented as a possible explanation of these findings. In fact, social interaction between these groups is encouraged. For example, as part of school policy TAG students and regular program students collectively organize and produce an international school fair. They share a mutual dining hall, and participation on various sports teams and school organizations is open to both groups. As a result, social comparisons between these groups is facilitated.

Janos, Marwood, and Robinson (1985) reported that gifted children are generally respected and valued by their peers. Moreover, Schneider (1987) stated that given



	General	Academic	Social
Tag	58.40	13.20	9.03
Regular	53.62	10.82	8.73

Figure 1. Mean Self-Concept Scores by Program

the opportunity for interaction, gifted and nongifted children will influence each other positively. Research conducted by Coleman and Fults (1982; 1985) reporting diminished self-concepts for the gifted used segregated programs where participants were physically separated from regular school children. Other self-concept studies that did not favor segregated classrooms for gifted children also used programs where participants were not associated with regular school children (Olszewski, et al, 1987). Finally, in some studies detailed descriptions of each program were not provided (Bracken, 1980; Dean, 1977), as a result, effective comparisons were not permitted for purposes of this discussion.

Still other factors which may explain this lack of general and social self-concept differences between TAG students and regular program students is based upon experimenter observations. For example, TAG students in this program are generally well accepted by their peers, resulting in minimal decrease to their social development. Although a formal peer rating scale was not administered, discussions with teachers and students from each program suggested that interactions between TAG and regular students were amiable. In fact, input from regular program students implied that many of their best friends were from the TAG program, or that they enjoyed participating in extracurricular activities with TAG

students.

Secondly, participation in this program is instituted at a point when **all** students will leave the sixth grade for a new regional school (junior high school). The move to a new school is considered stressful for adolescents (Simmons & Blyth, 1987) and has been related to diminished self-concept (Suls & Sanders, 1982). Hence, all students in the present study are starting out on equal terms from a social competence perspective. Previous studies discussed in the review of literature evaluated programs comprised of elementary school students (Coleman & Fults, 1982, 1985; Olszewski et al, 1987). As a result, the dilemmas of changing schools and adolescence were not an influencing factor on self-concept scores.

Third, TAG participants attend the same **regional** high school they would have, had they not gained acceptance into a specialized gifted program. Therefore, classmates from previous years are attending the same school. This permits the gifted child to maintain friendships that were developed while he or she was not enrolled in a special gifted setting to the same extent that regular students can. Thus, effects on social self-concept are going to be minimal, reflecting a lack of significant differences between groups.

To conclude, given the fact that TAG participants take part in numerous extra-curricular activities with

regular program students, the gifted child in this study is provided opportunity to interact with others who value his or her capabilities. The gifted child perceives these positive evaluations and internalizes them, resulting in an increased sense of social self-worth. Furthermore, Janos and Robinson (1985) present the theory that gifted children are as advanced in dealing with social situations as they are in dealing with cognitive or academic problems. If this is the case, a gifted child provided opportunity to participate in a social setting with others would most likely succeed in those interactions. As such, self-concept relating to a social domain would remain stable in comparison to regular school children.

Academic Self-Concept between Programs. In reference to levels of academic self-concept between groups, TAG students did demonstrate significantly higher scores on the Piers-Harris subscale of Intellectual and School Status (academic self-concept). Based upon similar principles of social comparison theory as those discussed above, academic self-concept by TAG students was also not expected to increase or decrease significantly in comparison to those reported by regular program students. Therefore, this finding was not anticipated. However, this result is consistent with previous research found in the gifted literature that suggests gifted children

evaluate their academic and intellectual capabilities more positively than regular school children (Colangelo & Kelly 1983; and Kelly and Colangelo 1984).

As discussed previously, it is believed that the gifted child experiences positive feedback from peers and teachers. This in turn, creates an environment where the gifted child becomes valued for their special talents. Positive feedback regarding a gifted child's placement in a special program is interpreted by that child as a worthy attribute. Typically, these positive evaluations can be internalized, resulting in higher levels of academic self-concept. Therefore, simply being acknowledged as a TAG participant can have positive effects on levels of academic self-concept (Byrne, 1990).

In summary, TAG students in this sample reported significantly higher academic self-concept scores than regular program students. However, differences between these groups on measures of general and social self-concept were not significant. These findings suggest that type of program can influence participants' self-concepts, and that segregation for purposes of instruction is not damaging to participants self-concept so long as there is integration with regular students on other levels.

Hypothesis Two: Gender Differences and Domain Specific Self-Concept.

Previous researchers investigating gender differences with regular school students discuss the occurrence of lower self-concept scores for adolescent females in comparison to adolescent males (Simmons & Blyth, 1987; Simmons & Rosenberg, 1975). In gifted populations however, females have been shown to report higher levels of academic self-concept than gifted males (Loeb & Jay, 1987).

Based upon these findings, the present study predicted a lack of significant differences on measures of general and social self-concept between genders. Academic self-concept however was expected to be significantly higher for TAG females than for all other students. The results only partially supported these hypotheses.

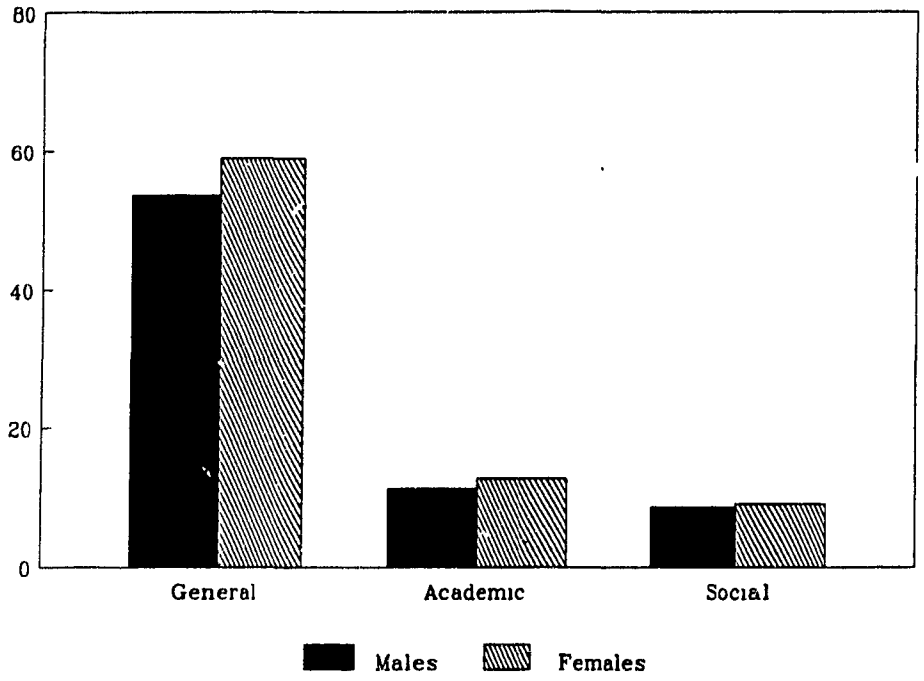
As expected, no significant differences emerged between males and females in this sample on measures of general and social self-concept. However, contrary to expectations, there were also no detected differences on measures of academic self-concept between males and females. An analysis of mean scores for each gender indicates that females did report a higher score on measures of academic self-concept (Fig 2). However, statistical analyses for the effects of gender and program on measures of academic self-concept indicate that

differences were not significant.

Possible explanations. It appears that gender differences in this particular sample have been abated. Once again, program effects are credited with reducing differences in self-concept in this study. Because of the encouraged interaction between each program, students participating in this setting are interacting in a relatively non-competitive environment. Previous research stated that gifted females relate feelings of self-worth to levels of academic achievement (Loeb & Jay, 1987). If TAG males and TAG females are performing at similar levels of academic accomplishment, it makes sense that feelings of self-worth between these groups would also be similar. As for comparisons between TAG females and students from the regular program, it is suggested that TAG females in this sample do not value academic achievement as highly as would a gifted female participating in a strictly segregated environment. Therefore, levels of self-concept for this group are closer to those reported by regular school children. Further investigations examining alternate explanations are necessary.

Hypothesis Three: IQ, Achievement Scores and Tag Students' Domain-Specific Self-Concepts.

The final hypothesis to be discussed deals once again



	General	Academic	Social
Male	53.54	11.28	8.66
Female	58.84	12.76	9.13

Figure 2. Mean Self-Concept Scores by Gender

with issues of giftedness and domain-specific self-concept. For this section however, self-concept was assessed in relation to TAG students' IQ and achievement scores.

Overall Results. Findings indicated that there were no significant self-concept differences between TAG students scoring at or above the median IQ and those scoring below the median.

Also, using a median-split achievement score, no significant differences were detected on measures of domain-specific self-concept between above and below median TAG students.

Previous Studies. Research conducted by Coleman and Fults (1982; 1985) reported that lower IQ gifted children participating in a special program were prone to demonstrate decreased levels of general self-concept in comparison to gifted children scoring highly on an IQ measure. Their study utilized a social comparison framework, but only reported results for measures of general self-concept and IQ. The present study used both IQ and achievement scores, plus domain-specific levels of self-concept. To insure that findings would be consistent with those reported in previous research, and to replicate those methods conducted in the Coleman and Fults studies,

IQ was used. However, school achievement level was added as a more accurate descriptor of another's ability and performance. Achievement level, rather than IQ, is regarded as more public knowledge of another's performance or ability (Sattler, 1988).

Nevertheless, findings for the present study did not support those presented in the Coleman and Fults (1982, 1985) research. There are several important contrasts between this study and those conducted by Coleman and Fults that may explain these inconsistencies. The first of these is found in differences of experimental design between each study. For example, findings in the Coleman and Fults studies were based on posttest administrations of the Piers-Harris Instrument. The present study collected data based on a single administration of the Piers-Harris test. Also, their sample was considerably larger than that used here, and it was drawn from physically segregated gifted programs in the mid-western United States. As a result, the present study is hardly representative of the populations used in these previous studies.

Secondly, Coleman and Fults divided their sample based on a median IQ point of 136. They reported a range in scores to be 75. The median IQ used in this study was 126 but the sample demonstrated a range in scores of only 44 points. This reduced variation in IQ scores may

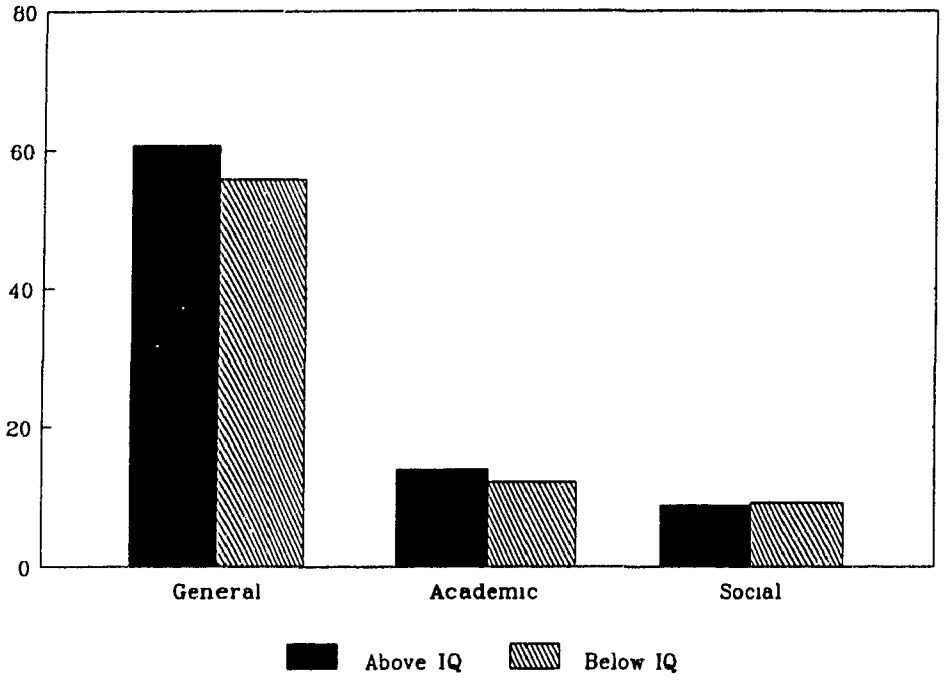
account for the lack of significant self-concept differences determined between high and low groups (Fig. 3). Had the sample been larger, creating a potential for a larger range in IQ scores, significant self-concept differences between groups may have been detected.

In relation to a median achievement score, lack of significant self-concept differences between high and low groups can also be accredited to small sample size and minimal variation between respondents' scores (Fig. 4). In this case, the median point was calculated as 84.0, with a range of only 19.8 points between the highest and lowest achievement score.

Social Comparison Theory

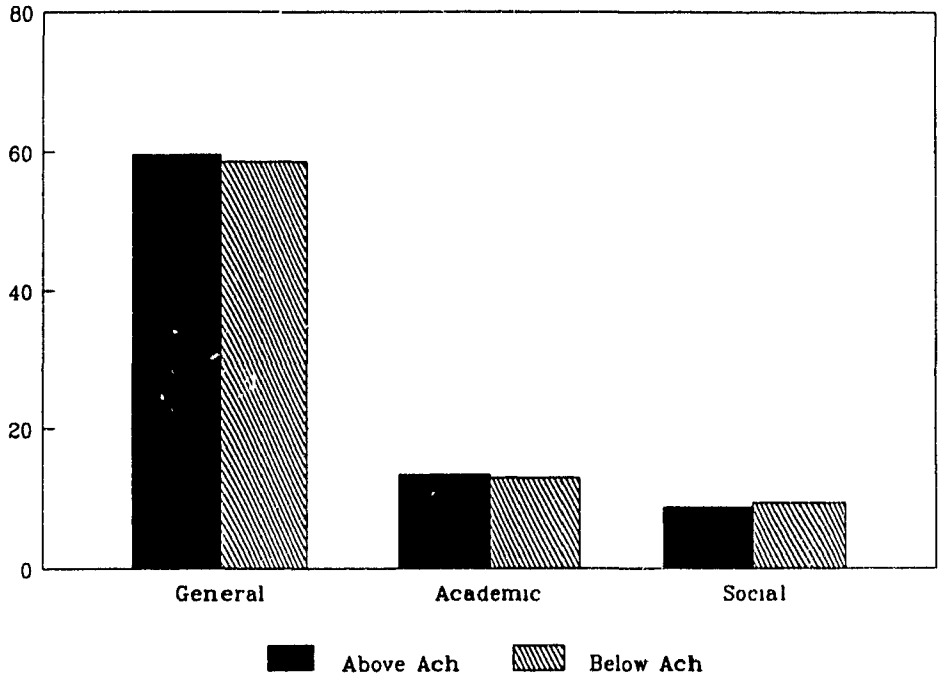
To discuss findings of this hypothesis in relation to social comparison theory, one must consider two important sub-postulates of the theory itself. First, the theory contends that "...the tendency to compare oneself with some other specific person decreases as the difference between their ability and one's own increases" (Festinger, 1954, p. 120). Also, Festinger stated that "... a person will be less attracted to situations where others are very divergent from him than to situations where others are close to him for both opinions and abilities " (p. 123).

In view of the above comments, TAG students by definition are expected to seek out and compare themselves



	General	Academic	Social
Above Median IQ	60.59	14.00	8.86
Below Median IQ	55.72	12.22	9.22

Figure 3. Mean Self-Concept Scores by Tag IQ Group



	General	Academic	Social
Above Median Achievement	59.50	13.42	8.68
Below Median Achievement	58.48	13.00	9.33

Figure 4. Mean Self-Concept Scores by Tag Achievement Group

with other highly capable students. What if that TAG student is low achieving or in a low IQ category? Within group comparisons would have the below median TAG students interacting with others who are more highly intelligent, and higher achieving than themselves. This relationship was expected to reduce levels of self-concept in the median groups.

However, a more detailed analysis of social comparison theory suggests the exact opposite may be occurring. Below median TAG students are more similar in ability to the regular program students than they are to other TAG students. Because they are provided opportunity to interact closely with the regular school population, it is possible that these below median groups are choosing regular program students as similar others for comparisons prior to forming attitudes regarding their self-worth. In effect, self-evaluations would remain stable. This would result in both above and below median TAG students reporting adequate levels of self-concept, hence, no significant differences emerge on comparisons.

Also, Academic courses in the TAG program are developed in accordance with curiosities and interests of students involved. Each student is encouraged to progress at a level of individual ability. Consequently, most of the required courses can be completed by the end of the 10th grade. Once this has been accomplished, students are

permitted to take advanced placement courses from local junior colleges, or to pursue individual enrichment opportunities. This within-group individualism also alleviates the comparison process.

Alternate explanations of these findings have also been considered. For example, what if below median achievement TAG students are classified as such simply because they are more socially active than TAG students who scored above the median? Moreover, very high achieving TAG students may be in some ways different than other students, thus lowering their social acceptability. What ever the case, significant differences between these groups did not emerge.

This finding has important implications in relation to gifted underachievers and policies used in program development for all gifted children. Further study is warranted.

General Conclusions

As discussed previously, social comparison theory introduces the assumption that we as humans, have an innate drive to evaluate our opinions and abilities (Festinger, 1954). The theory further contends that in the absence of objective, non-social means, "...people evaluate their opinions and abilities by comparison respectively with the opinions and abilities of similar

others " (Festinger, 1954, p. 118). This evaluation process provides us with information regarding our performances relative to those around us. We then interpret this information and form certain perceptions about ourselves. This theory suggests an active role on the part of each person in a social setting. So long as there are objective standards or similar others with whom to compare ourselves, the individual will seek them out, thus evaluations concerning the self should remain stable, reflecting a high or acceptable level of self-concept.

In reference to previous studies, the theory of social comparisons implies that gifted children, segregated from nongifted children in an instructional setting, may experience unstable evaluations of self. As a result, general and social self-concept is reported to diminish because students are now comparing themselves to more able students than they would, had they remained in a regular setting (Coleman & Fults, 1982; 1985). Academic self-concept however would be expected to increase in comparison to regular program students. Academic qualities are more highly valued by peers (Janos & Robinson, 1985). Independent of social issues, attributes relating to school achievement and success are afforded higher status by school age children (Janos, Marwood, & Robinson, 1985). These concerns result in higher levels of academic self-concept for gifted children.

Educational Implications and Future Research

In summary, all students in this sample displayed generally positive levels of self-concept. No evidence was found to suggest that segregated gifted programs effect self-concept negatively. Although replication is needed using different types of gifted programs, the findings of this study indicate that this particular TAG program has no adverse effects on participants' self-concepts. Moreover, the results of this study indicate that students recognized as gifted are aware of their academic abilities and have developed positive academic self-concepts consistent with their past successes.

With regard to sex differences in levels of self-concept, results indicate no significant differences between males and females in this study on measures of general, academic or social self-concept. Again, this finding is interpreted as a function of this particular gifted program. Findings are inconsistent with previous research where gifted females have been shown to report higher levels of academic self-concept than gifted males, and adolescent females from a regular program were reported to have demonstrated significantly lower general self-concepts than their male counterparts. Nevertheless, it is important that counselors and educators recognize this relationship between adolescence, self-concept and gender. In so doing, efforts can be made to acknowledge

the needs of females surrounding issues of academic success, achievement and a healthy self-concept in any type of educational program.

The theory of social comparisons and previous research suggests that self-concept is derived from social interactions. Researchers that have measured relationships between psychosocial maturity and self-concept document consistently that intellectually gifted students are superior to students not identified as gifted both in their ability to make certain kinds of social judgements and in their play interests (Janos & Robinson, 1987). More clearly, gifted children master various types of social interaction at a faster rate than nongifted children. Therefore, it seems appropriate that they would acquire methods that would enhance levels of self-concept earlier and more efficiently than their peers.

Overall, findings outline a specific attribute of this type of special program; one that makes it qualitatively different from others considered in previous research. That is its ability to combine gifted students with students from the regular program socially, yet remain independent on an instructional level. These factors change the setting in which social comparisons are conducted. Therefore, previous theories relating to how special program gifted children derive a sense of self-worth no longer apply. This is not to say that social

comparison theory can be rejected as a possible explanation of self-concept development, only that for this specific type of sample, social comparisons appear to be carried out qualitatively different from those reported in previous studies.

Educators need to be sensitive to possible feelings of isolation on the part of all students in any instructional program. Assisting children to form social relationships and gain the acceptance of their peers may enhance levels of self-concept greatly. Future research needs to be focused at isolating specific practices to be used with gifted children to promote positive self-concepts and good peer relations. Using a standardized self-concept instrument offers information a respondent is willing to report. What it does not offer however is information regarding the internal components of this psychological construct. Future studies should consider qualitative methods of gaining insight into self-concept in different groups. For example, clinical interviews, detailed observations, and peer ratings or nominations would compliment findings determined by the standardized test.

Few studies have systematically examined the effects of specialized programming in relation to social comparison theory. It is recommended that future studies consider this theoretical framework using differing types

of programs, matched with control samples to permit viable comparisons. Thus far, studies suggest that social comparison theory is important to the development and operation of self-concept. Further study may be effective in determining the exact link between these two variables.

To conclude, gifted students represent a great resource for positions of leadership in our future society. With this in mind, developing gifted students' full potential is an important concern for educators, counselors and parents. Future studies should make a renewed commitment to the importance of providing support and stimulation for social, as well as academic areas of the gifted child's development.

Limitations of The Study

The following limitations are noted in the present study:

1. Seventh and eighth grade classes were used in this study as this age range has been relatively overlooked in previous gifted research examining levels of self-concept. Typically, seventh and eighth grade students are experiencing the initial challenges of adolescence. This is a sensitive stage of personality development, therefore self-concept scores may be altered in some unforeseen manner. Petersen (1980) suggested there is the possibility that other factors surrounding

adolescence mask the effects of certain variables when evaluating self-concept. As a result, further study into these relationships is essential.

2. In addition to the nongifted control group, comparisons with a group of gifted students participating in an integrated or regular program would have provided additional information regarding the effects of the TAG program under investigation.

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Appendix A: "The Piers-Harris Children's Self-Concept Scale"

"THE WAY I FEEL ABOUT MYSELF"

The Piers-Harris Children's Self-Concept Scale

Ellen V Piers, Ph D and Dale B Harris, Ph D

Published by

WPS WESTERN PSYCHOLOGICAL SERVICES
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12031 Wilshire Boulevard
Los Angeles California 90025

Name. _____ Today's Date _____

Age: _____ Sex (circle one) Girl Boy Grade _____

School: _____ Teacher's Name (optional) _____

Directions: Here is a set of statements that tell how some people feel about themselves. Read each statement and decide whether or not it describes the way you feel about yourself. If it is *true or mostly true* for you, circle the word "yes" next to the statement. If it is *false or mostly false* for you, circle the word "no." Answer every question, even if some are hard to decide. Do not circle both "yes" and "no" for the same statement.

Remember that there are no right or wrong answers. Only you can tell us how you feel about yourself, so we hope you will mark the way you really feel inside.

TOTAL SCORE: Raw Score_____ Percentile_____ Stanine_____

CLUSTERS: I_____ II_____ III_____ IV_____ V_____ VI_____

W-180A

1 My classmates make fun of me . ... yes no

2 I am a happy person ... . yes no

3 It is hard for me to make friends .... .yes no

4 I am often sad . . . . yes no

5 I am smart . ...yes no

6 I am shy . . . .yes no

7. I get nervous when the teacher calls on me ..... yes no

8 My looks bother me . . .. yes no

9 When I grow up, I will be an important person ..... .yes no

10 I get worried when we have tests in school ....yes no

11 I am unpopular .. ..yes no

12 I am well behaved in school ....yes no

13 It is usually my fault when something goes wrong .....yes no

14 I cause trouble to my family..... ....yes no

15 I am strong . ...yes no

16 I have good ideas .. . .yes no

17 I am an important member of my family . .. . .yes no

18 I usually want my own way . . ..yes no

19 I am good at making things with my hands .. ..yes no

20 I give up easily .. ..yes no

21. I am good in my school work ... .yes

22 I do many bad things .... .yes

23 I can draw well .. ..yes

24 I am good in music.....yes

25 I behave badly at home..... yes

26 I am slow in finishing my school work.....yes

27 I am an important member of my class .....yes

28 I am nervous .....yes

29 I have pretty eyes .....yes

30 I can give a good report in front of the class .....yes

31. In school I am a dreamer .....yes

32 I pick on my brother(s) and sister(s) .....yes

33. My friends like my ideas .....yes

34 I often get into trouble .....yes

35 I am obedient at home .....yes

36 I am lucky . ...yes

37 I worry a lot.... ....yes

38 My parents expect too much of me..... .....yes

39 I like being the way I am .....yes

40 I feel left out of things ....yes

41 I have nice hair ... yes no

42 I often volunteer in school ... yes no

43 I wish I were different ... yes no

44 I sleep well at night ... yes no

45. I hate school ... yes no

46. I am among the last to be chosen for games ... yes no

47. I am sick a lot ... yes no

48. I am often mean to other people ... yes no

49. My classmates in school think I have good ideas ... yes no

50. I am unhappy ... yes no

51. I have many friends ... yes no

52. I am cheerful ... yes no

53. I am dumb about most things ... yes no

54. I am good-looking ... yes no

55 I have lots of pep ... yes no

56 I get into a lot of fights ... yes no

57. I am popular with boys ... yes no

58 People pick on me ... yes no

59 My family is disappointed in me ... yes no

60 I have a pleasant face ... yes no

61 When I try to make something, everything seems to go wrong ... yes no

62 I am picked on at home ... yes no

63 I am a leader in games and sports ... yes no

64 I am clumsy ... yes no

65 In games and sports, I watch instead of play ... yes no

66 I forget what I learn ... yes no

67 I am easy to get along with ... yes no

68 I lose my temper easily ... yes no

69 I am popular with girls ... yes no

70 I am a good reader ... yes no

71 I would rather work alone than with a group ... yes no

72 I like my brother (sister) ... yes no

73 I have a good figure ... yes no

74 I am often afraid ... yes no

75 I am always dropping or breaking things ... yes no

76 I can be trusted ... yes no

77 I am different from other people ... yes no

78 I think bad thoughts ... yes no

79 I cry easily ... yes no

80 I am a good person ... yes no

Appendix B: **Cluster Items, Response Key, and Item Correlations for the Revised Cluster Scales.**

Table B-1
Cluster Items, Response Key, and Item Correlations for the Revised Cluster Scales

	Item[a]			r
	I. Behavior			
12.	I am well behaved in school.	(Y)	(II)	.58
13.	It is usually my fault when something goes wrong.	(N)		.37
14.	I cause trouble to my family.	(N)		.49
21.	I am good in my school work.	(Y)	(II)	.46
22.	I do many bad things.	(N)		.60
25.	I behave badly at home.	(N)		.54
34.	I often get into trouble.	(N)		.66
35.	I am obedient at home.	(Y)		.28
38.	My parents expect too much of me.	(N)		.41
45.	I hate school.	(N)		.56
48.	I am often mean to other people.	(N)		.45
56.	I get into a lot of fights.	(N)		.54
59.	My family is disappointed in me.	(N)		.40
62.	I am picked on at home.	(N)		.49
78.	I think bad thoughts.	(N)		.50
80.	I am a good person.	(Y)	(VI)	.46
	II. Intellectual and School Status			
5.	I am smart.	(Y)	(III)	.61
7.	I get nervous when the teacher calls on me.	(N)	(IV)	.38
9.	When I grow up, I will be an important person.	(Y)		.38
12.	I am well behaved in school.	(Y)	(I)	.38
16.	I have good ideas.	(Y)		.39
17.	I am an important member of my family.	(Y)		.33
21.	I am good in my school work.	(Y)	(I)	.57
26.	I am slow in finishing my school work.	(N)		.60
27.	I am an important member of my class.	(Y)		.47
30.	I can give a good report in front of the class.	(Y)		.53
31.	In school I am a dreamer.	(N)		.51
33.	My friends like my ideas.	(Y)	(III)	.48
42.	I often volunteer in school.	(Y)		.39
49.	My classmates in school think I have good ideas.	(Y)	(III, V)	.55
53.	I am dumb about most things.	(N)		.53
66.	I forget what I learn.	(N)		.54
70.	I am a good reader.	(Y)		.43
	III. Physical Appearance and Attributes			
5.	I am smart.	(Y)	(II)	.49
8.	My looks bother me.	(N)	(IV, VI)	.
38				
15.	I am strong.	(Y)		.40
29.	I have pretty eyes.	(Y)		.42
33.	My friends like my ideas.	(Y)	(II)	.51
41.	I have nice hair.	(Y)		.45
49.	My classmates in school think I have good ideas.	(Y)	(II, V)	.54
54.	I am good-looking.	(Y)		.63
57.	I am popular with boys.	(Y)		.48
60.	I have a pleasant face.	(Y)	(VI)	.45
63.	I am a leader in games and sports.	(Y)		49
69.	I am popular with girls.	(Y)	(V)	44
73.	I have a good figure.	(Y)		.40
	IV. Anxiety			
4.	I am often sad.	(N)		.49
6.	I am shy.	(N)	(V)	.35
7.	I get nervous when the teacher calls on me.	(N)	(II)	.56
8.	My looks bother me.	(N)	(III, VI)	.48
10.	I get worried when we have tests in school.	(N)		43
20.	I give up easily.	(N)		.35
28.	I am nervous.	(N)		.53
37.	I worry a lot.	(N)		.57
39.	I like being the way I am.	(Y)	(VI)	.38
40.	I feel left out of things.	(N)	(V)	.58
43.	I wish I were different.	(N)	(VI)	46
50.	I am unhappy.	(N)	(VI)	.38
74.	I am often afraid.	(N)		.49
79.	I cry easily.	(N)		46
	V. Popularity			
1.	My classmates make fun of me.	(N)		48
3.	It is hard for me to make friends.	(N)		.57
6.	I am shy.	(N)	(IV)	40
11.	I am unpopular.	(N)		56
40.	I feel left out of things.	(N)	(IV)	61
46.	I am among the last to be chosen for games.	(N)		.66
49.	My classmates in school think I have good ideas.	(Y)	(II, III)	.46
51.	I have many friends.	(Y)	(III)	.65
58.	People pick on me.	(N)		.57
65.	In games and sports I watch instead of play.	(N)		44
69.	I am popular with girls.	(Y)	(III)	.43
77.	I am different from other people.	(N)		.28
	VI. Happiness and Satisfaction			
2.	I am a happy person.	(Y)		.48
8.	My looks bother me.	(N)	(III,IV)	.40
36.	I am lucky.	(Y)		.51
39.	I like being the way I am.	(Y)	(IV)	.51
43.	I wish I were different.	(N)	(IV)	.54
50.	I am unhappy.	(N)	(IV)	.50
52.	I am cheerful.	(Y)		.51
60.	I have a pleasant face.	(Y)	(III)	.56
67.	I am easy to get along with.	(Y)		.41
80.	I am a good person	(Y)	(I)	.33

[a] Letters in parentheses indicate the direction of keyed response (Y = Yes, N = No). Roman numerals in parentheses indicate other scales on which the item loads significantly (.30).

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November 5, 1990

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