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A RELIABILITY STUDY OF THE ADOLESCENT AND ADULT
SELF-CONCEPT RETROSPECTIVE SCALE

by
Andrea D. Marino

A Thesis

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree
of
The Graduate School
at
Rowan University
May 3, 2000

Approved by

Professor

Date Approved 5/2/00

ABSTRACT

Andrea D. Marino

A Reliability Study of the Adolescent and Adult

Self-Concept Retrospective Scale

Spring 2,000

Dr. John Klanderman

School Psychology

The purpose of this study was to establish test-retest reliability coefficients for the Adolescent and Adult Self-Concept Retrospective Scale (AASRS). This study utilized a one-week duration between test administrations for the test instrument. There were thirty-one college students used, ranging in age from eighteen to twenty. The AASRS is an individually administered, interview type self-concept measure. The version of the test used in this study is designed for older populations. The Pearson product-moment correlation statistical procedure was used to calculate the correlation coefficients for this sample. The correlations for both the Global and Distortion Indexes were calculated. The correlations were found to be statistically significant. It was concluded that the AASRS demonstrated strong test-retest reliability.

MINI ABSTRACT

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A Reliability Study of the Adolescent and Adult

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Spring 2,000

Dr. John Klanderman

School Psychology

The Adolescent and Adult Self-Concept Retrospective Scale (AASRS) is a self-concept test instrument designed to objectively assess the self-concept perceptions of adolescents and adults. The purpose of this study was to establish test-retest correlation coefficients for the adolescent version of the test instrument. The AASRS was found to display favorable test-retest reliability correlation coefficients and was deemed to have strong stability reliability.

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I would like to express my appreciation to my advisor, Dr. John Klanderman.

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Chapter One: The Problem

Need

There is a necessity for a device that attempts to acceptably measure the self-concept levels of adolescent populations. The development of such a test would be of practical importance considering there are many individuals in our society whose breadth of adaptive functioning would suggest that a positive change in self concept would be greatly anticipated if not fundamental for their very survival. The Adolescent and Adult Self Concept Retrospective Scale (AASRS), a revision of the Joseph Self Concept Scale For Young Children (JSSYC) and the Joseph Preschool and Primary Self Concept Screening Test (JPPSST), can be utilized to analyze the self-concept perceptions of adolescent and adult populations.

Although the structural core of self-concept is forged early in childhood, it does progressively change with time. The positive and solidly formed self-concept grows stronger, fuller, and more abundantly complex. However, the self-concept that started on a shaky foundation may blunder, progress negatively, or eventually deteriorate all together. This inferior self-concept will sabotage a person's endeavors and thereby further generate negative experiences. Therefore, the benefits of retaining a self-concept measuring device are extensive.

Purpose

This study will utilize coefficient scores for the purpose of establishing test-retest reliability for the AASRS. Revisions of this scale are currently under way, including the development of national norms. Validity and reliability studies are being conducted for the revised scale to ascertain the test's applicability. This study is one component of the revision of the test.

Hypothesis

As stated above, the purpose of this test is to establish test-retest reliability coefficients for the AASRS, a revision of the JSSYC. During this test's initial development as the Joseph Preschool and Primary Self Concept Screening Test (JPPSST), favorable reliability scores were yielded. Therefore, this researcher thinks that, the Adolescent and Adult Self Concept Retrospective Scale will yield favorable test-retest reliability coefficient scores for this population sample.

Theory

The concept of "self" has intrigued and fascinated man for centuries. It has been the focus of psychological theories from the start. Several contemporary theorists have placed a central importance upon the self as a primary psychological entity.

Carl Rogers, a prominent researcher in this area, developed a system of psychotherapy which he labeled as "client centered" (Rogers, 1951). He believed the

structure of the self formed as a result of interactions with the environment and, more importantly, with others. Rogers' view of the self incorporated a developmental pattern of conscious perceptions experienced by individuals that would greatly influence their subsequent behaviors and adjustment.

Another notable and influential contemporary researcher in the field of self study is Stanley Coopersmith. His theoretical formulation of "self-esteem" heavily focused on self-evaluation (Coopersmith, 1984). He defined self-esteem as, "the evaluation a person makes and customarily maintains of him or herself; that is an expression of approval or disapproval, indicating the extent to which a person believes him or herself competent, successful, significant, and worthy."

Erik Erikson proposed a theory of psychosocial development that incorporated adolescence; a period that begins with the physical changes of puberty and lasts until roughly age 20 (Carver and Scheier, 2000). The concept of identity reflects an integrated sense of self. It's the answer to the question, "Who am I?" (p.294). According to the authors, "To emerge from adolescence with a strong sense of identity requires the self-concept to evolve in two ways. First, you must consolidate the self-conceptions formed during the previous stages, and merge them in a way that feels sensible. Second, this integrated self-view must itself be integrated with the conception of you that others hold. Only by considering both views does a rounded sense of identity emerge."

Abraham Maslow was another theorist who used the concept of self to formulate his theory on motivation and personality. Maslow (1970) perceived various human needs as constituting a hierarchy. The most primitive needs, those of the physiological nature, formed the base of the hierarchy and precede the remaining four. Respectively, they are

social needs, esteem needs, safety needs, and the need for self-actualization. His theory encompassed the contention that the self formed through relationships and the evaluations of those relationships.

All of the previously mentioned theorists maintained a similar perspective. The development of self-concept is profoundly influenced by an individual's perception of how others interact with them. One's self-concept is molded by evaluative judgments regarding discerned self-experiences.

Background

With regard to the development of this particular scale, three seemingly unrelated areas of research and personality theory serve as its inspiration. The first involves memory research. The general self-concept theory underlying the development of the JPPSST and JSSYC, the original versions of the AASRS, postulates that initial development of one's self-image is in great part determined by an individual's subjectively based perceptions of how others are treating or responding to him or her (Joseph, 1979). Positive and negative self-judgements become the building blocks in forming one's self-image and thus our remembered past, as it relates to self-experiences "gives structure and definition to the person we think of as our self" (Loftus & Ketchum, 1994). Therefore, the self-image is composed of a group of memories which, according to the reconstructionist model, are creative blendings of fact and fiction that can be effected by influences such as affective states, past experiences, postevent information, role expectations, the power of suggestion, and perceived obedience to authority.

The second area of research that supports the development and use of the AASRS involves the consistency of global self-evaluations. Many prominent researchers have offered convincing theoretical and empirical support for this position (Combs & Snygg, 1959; Festinger, 1962; Horney, 1945; Jersild, 1952; Lecky, 1945; Lewin, 1935; Rogers, 1951; Shrauger & Lund, 1975). Prescott Lecky typified these researchers by pointing out that the preservation of one's perception of self is the prime motive in all behavior (Joseph, 1998). Although the tendency to maintain consistency in the cognitive state develops at an early age, gradual change with respect to self-evaluations can take place. Therefore, positively formed self-images tend to grow stronger while negatively formed self-images tend to diminish. One can therefore argue that self-judgements regarding the "way we were" are usually closely related to self-judgements regarding the "way we are" (Joseph, 1998).

The third area of research that supports the development of the AASRS involves the study of early recollections. Although early recollections have appeared in the psychological literature dating back to G. Stanley Hall (1899), most of the interest generated by this topic involved the work of Freud and his followers. They believed that early childhood recollections were "screen memories" that covered up infantile sexual conflicts or traumas that were repressed (Bartlett, 1932; Brodsky, 1952; Freud, 1938). To contrast this view, Alfred Adler posited early memories were retained because of a selective factor in memory (Adler, 1931). Adler also recognized that early memories contained omissions, exaggerations, and distortions. Individuals tend to mold early memories in accordance with their inner needs. With these views in mind, some followers of Adler proposed that they could utilize early recollections diagnostically as a projective

technique since it would be possible to infer from them how individuals perceived themselves (Mosak, 1958).

The historical antecedents of the reconstructionist memory model and the self-consistency theorists can in part be seen in Adler's early recollections writings. Furthermore, these three research areas can be interlocked to form the basic theoretical support structure underlying the development and use of the AASRS as a valid measure of self-concept for adolescent and adult populations.

Because the interval between test administrations is relatively minor, the hypothesis presented in this study should remain unaffected by the previously stated predication that self-concepts progressively change with time. The research being conducted in this study will measure reliability, which is defined as, "the consistency of scores obtained by the same persons when they are reexamined with the same test on different occasions, or with different sets of equivalent items, or under other variable examining conditions" (Anastasi & Urbina, 1997). These authors also attest that the concept of reliability is generally restricted to short-range, random changes that depict the test performance itself rather than the entire behavior range that is being examined.

To conclude, performing this study will satisfy the conditions required for conducting this type of reliability study, which again is to yield favorable test-retest reliability for the AASRS and assist in the development of a secure self-concept measuring device.

Definitions

The AASRS and its predecessors, the JSSYC and the JPPSST, both employ the same definition of the self-concept construct. As stated in the test's manual, "the scale therefore defines self-concept as the way an individual perceives himself, his behaviors, how others view him, and the feelings of personal worth and satisfaction that are attached to these perceptions" (Joseph, 1979). Anastasi & Urbania (1997) defined test-retest reliability coefficient as the correlation between the scores by the same person that are derived from the separate administrations of the same test, and defined reliability as the consistency of scores obtained by the same person on the same test. These definitions will be used to determine the validity of the previously stated hypothesis.

Assumptions

It is to be assumed that the AASRS is a valid test for objectively assessing the self-concept levels of its target population. In addition, the interval between test administrations will not advocate the production of interceding variables such as practice effect, test-wise behavior, and significant change in self-concept perceptions.

Limitations

The size of the population sample may not sufficiently represent all adolescents. Also, the statistical results obtained by this study will be employed for the purpose of

developing a reliability measure, not to judge, evaluate, or make suggestions for the future endeavors of any subject with regard to his or her educational career.

Overview

In Chapter 2, the theory of self-concept will be further explored. The design of the study will be presented in Chapter 3, followed by the analysis of results included in Chapter 4. Finally, Chapter 5 will embody the summary and conclusions of the study.

Chapter Two: Literature Review

For this chapter, the definition of self-concept and related ideas will be addressed first so that a better understanding of the construct being measured in this study is obtained.

Next, reviews conducted on the original version of the Joseph Pre-School and Primary Self-Concept Screening Test will be illustrated, as well as scale validation studies of the Adolescent and Adult Self Concept Retrospective Scale.

The following section will discuss the reliability of self-concept scales, in relation to adolescence and gender, academics, parental and peer influences, and cross- cultural studies.

In conclusion, the findings of these studies will be summarized and scores of the various instruments will be discussed.

Self-Concept

Many theorists have attempted to utilize the concept of self in their research and have assumed that the self gradually evolves during development, becoming more complex and elaborate. Joseph (1979) defined self-concept as “ the way an individual perceives himself, his behaviors, how others view him, and the feelings of personal worth and satisfaction that are attached to those perceptions.” Originally, it was his interest in

the social-emotional development of young children that prompted the inception of a self-concept scale. However, its usefulness has been documented at upper age levels. The Adolescent and Adult Self-Concept Retrospective Scale represents a unique approach to the assessment of self-images in older subjects, giving validation to the assumption that the development of a self-image is in great part determined by an individual's subjectively based perceptions of how others are treating or responding to him or her (Joseph, 1979). Subsequently, the self-image becomes heavily laden with evaluative judgements regarding these perceived "self experiences." Positive and negative self-judgements become the building blocks in forming one's self-image and thus our remembered past, as it relates to self-experiences and "gives structure and definition to the person we think of as our self" (Loftus & Ketchum, 1994).

Reviews of the Joseph Pre-School and Primary Self-Concept Screening Test

The Ninth Mental Measurements Yearbook published two reviews of the original version of the Adolescent and Adult Self-Concept Retrospective Scale. In the first review, the commentator, Kathryn Clark Gerken, contended that the test maintained proficiencies as well as inadequacies. In accordance with Joseph, she provided support for the theory from professional literature. She also advocated his statement of the nature and purpose of the test, as well as his definition of terms. According to Gerken, the description of the test development was clear, as well as the directions for administering and scoring the test. A major strength depicted in the critique was the test's empirical determination of how young children might pictorially represent the selected items. Comprehensively,

Gerken concluded, “The test is indeed one of the best self-concept measures available for young children. The test is compact and relatively inexpensive, except for the cost of the pictures. The manual is well written, directions are very clear, the test was standardized in a reasonable size population, and the author has attempted to provide evidence of reliability and validity (Gerken, p.765).”

The evaluator also illustrated the test’s weaknesses. The first area of concern was item selection. She stated, “ the original items were selected on a ‘rational face validity basis’ in order to tap five theoretical self-concept dimensions. His source for the items is not clear (p.765).” Concerning the quality of the pictures, she asserted that some ambiguity could be eliminated, and more importantly, the overall quality of the drawings could be improved. In addition, Gerken affirmed that the author did not provide the raw data which would indicate the number of children in each age group who responded negatively to each item, nor the statistics describing the empirical relationship of each item to the Global score. The final area of weakness discussed by the annotator, was Joseph’s suggestion for performing a qualitative analysis of the Identity Reference Drawing because it requires subjects to draw a picture of themselves. Gerken felt more caution should be employed when interpreting human figure drawings because there is a large amount of research that questions the validity of such analysis. In conclusion, the analyst maintained that although the test needs additional research and cautious interpretation, it is a useful research tool or interview guide.

The Joseph Pre-School and Primary Self-Concept Screening Test was also critiqued by Cathy Fultz Telzrow and was published in the Ninth Mental Measurements Yearbook. The reviewer’s first reproach regarded item selection. She contended that

some of the test items were potentially threatening in nature. She recommended that the nature of the items and the purpose for such a test be explained thoroughly prior to the test's administration (Telzrow, p.766). Telzrow also added three additional criticisms related to scoring procedures. Her first admonition was that the procedures for completing the Diagnostic Dimensional Evaluation were not summarized on the record form. Second, she claimed that space should have been afforded for notation by eliminating the independent rater's question from the record form. Last, Telzrow noted that the Item Response Summary forms were no longer published (p.766).

Technical data for the JPPSST was favorable. The standardization sample consisted of various ethnic groups, proportionately, and included handicapped children. The test-retest reliability for the modest sample was reported at .87. The predictive value for both Poor and High Risk Negative categories correctly identified poor academic achievement four years later for 83% of preschool children and 70% of kindergartners, which was significant at the .001 level. To summarize, Telzrow contended, "The JPPSST may represent one of the best child-interview self-concept measures available. The test is founded in self-concept theory and reports favorable reliability and validity results. In addition, it is a brief, easily administered instrument which represents a useful screening tool for social-emotional disabilities in young children (p.766)."

To conclude, both reviews ascertained the test had a strong theoretical foundation, a well-written manual, adequate standardization, acceptable reliability and validity coefficients, and an appropriate pictorial design for testing young populations.

Scale Validation

Upon establishing a theoretical organizing structure for the AASRS, providing empirical evidence of construct validity for the scale is imperative. Construct validity refers to the development of evidence that supports a test's claim to measure the given trait it affirms to measure. In order to establish construct validity of the AASRS, two conditions had to be satisfied. First, the test had to be age appropriate as a measure of self-concept. Second, the test had to be a valid reflection of the person's present self-concept.

To maintain these requirements, the global scores of the AASRS were correlated with scores derived from the Emotional Intelligence Quantified – Three Dimensional Index (EIQ-3DI), a parent interview scale that objectively measures emotional vulnerability, resilience, and stress exposure in children and their parents (Joseph, 1991). Forty adults from various communities in Northern Illinois were randomly selected to validate the AASRS. The sample ranged from twenty-eight to fifty-four years of age. The forty subjects were individually administered the EIQ-3DI and the AASRS by four psychologists. Half the subjects were administered the EIQ-3DI first with the other half completing the AASRS first. The counterbalanced design was utilized to minimize the effects of administration order (Joseph, 1998). For the purpose of validating the AASRS, correlations with Section IIIA of the EIQ-3DI were deemed most important. Section IIIA, which incorporated a three-point Likert scale format, featured forty-five statements that were read to subjects. The subjects were then asked to indicate whether they agreed, disagreed, or were neutral in their opinion of each statement. Overall, this section measured an adult's emotional well being. Items in Section IIIA dealt primarily with

variables related to the assessment of an adult respondent's self-esteem, locus of control, anxiety, conflict, depression, happiness-satisfaction, and social support levels.

A highly significant Pearson validity coefficient was obtained ($r = .72, p = .000$) when correlating scores between the AASRS and global scores from Section IIIA from the EIQ-3DI (Joseph, 1998). Highly significant validity coefficients were also obtained when sub-dimensions of Section IIIA were independently analyzed. For example, subscale scores from the thirteen items of Section IIIA that measured self-esteem/internal locus of control ($r = .67, p = .000$), the nine items from Section IIIA measuring anxiety/depression levels ($r = -.60, p = .000$), the fifteen items of Section IIIA that measured happiness/satisfaction ($r = .64, p = .000$), and the twelve items from Section IIIA that measured levels of social support ($r = .59, p = .000$) were all strongly correlated with the AASRS scores (Joseph, 1998).

Interestingly, AASRS scores were also significantly correlated with the emotional intelligence scores of the subjects' children as measured by Section I of the EIQ-3DI ($r = .58, p = .000$) and the stressful life events history of the subjects and their families as measured by Section II of the EIQ-3DI ($r = -.59, p = .000$) (Joseph, 1998).

Since all three sections of the EIQ-3DI were composed of items that were incorporated to measure key antecedent processes involved in self-concept development, the aforementioned correlational data provide strong empirical support in establishing both construct and criterion-related validity for the use of the AASRS as a self-concept measure in adult populations.

A validity study involving adolescents was also undertaken by correlating global AASRS scores with scores derived from administering the Piers-Harris Children's Self

Concept Scale (Piers, 1984). The Piers-Harris scale is a well-established eighty item self-enumerated questionnaire designed to assess how children and adolescents feel about themselves by indicating whether each statement applies to them using dichotomous “yes” or “no” responses. A sample of fifty-four subjects was included in the study ranging from twelve through sixteen years of age. With regard to gender, thirty were male and twenty-four were female. The subjects were scheduled to undergo case study evaluations as a result of experiencing academic, emotional, and/or behavioral difficulties in their respective suburban public schools. All fifty-four subjects were individually administered the AASRS and the Piers-Harris by nine psychologists using the aforementioned administration design.

As was the case in the adult validity study, a statistically significant Pearson validity coefficient was obtained ($r = .48, p < .001$) when correlating scores from the AASRS with global scores from the Piers-Harris Self Concept Scale (Joseph, 1998). However, it should be noted that about eighty-five percent of this study group was eventually found to be disabled using special federal education guidelines. Thus, given the consolidated nature of the sample, it seems likely that the obtained validity coefficient may underestimate what would likely be a much stronger correlational relationship had the sample of adolescents been represented by a greater mix of non-disabled individuals. Nevertheless, the obtained correlational data provide strong empirical support for the use of the AASRS as a self-concept measure in adolescent populations.

Additional validity data were generated through the use of an optional diagnostic technique that can be utilized after completing the standard AASRS administration. The idea underlying this adjunct technique stems from the earlier discussed consistency of

global self-evaluations literature (Joseph, 1998). It was noted that individuals tend to create and maintain a consistent cognitive state with respect to self-evaluations. Although gradual change in the self-image can take place after the structural core has been established, it is the structural core of the self-image that typically creates much of the momentum and direction for change (Joseph, 1998). Research on the EIQ-3DI also suggested that the cumulative effects of stressful life events play an important role in both developing the structural core and in creating momentum for self-concept change.

With this in mind, the adjunct technique involves completing the standard AASRS administration and then asking the subject how he or she would respond to each item "Today." Without using the stimulus pictures, the examiner then verbally reviews each dichotomous pair (e.g. clean versus dirty, playing alone versus playing with friends, etc.) and elicits verbal responses from the subject. By utilizing a different colored pen or pencil, the examiner can use the same record form to record the second set of responses. Since the subject has just been administered the scale, it usually takes only two to three minutes to repeat the items. The score obtained in the initial standard Retrospective administration is considered to be a reflection of a subject's true self-concept core but the second administration may shed light on both the direction and magnitude of self-concept change that has taken place since early childhood (Joseph, 1998). This "Momentum" score is derived by subtracting the first administration score (Retrospective) from the second administration score (Today). If the difference is a positive number, it can be assumed that the self-image may be strengthening over time. If the difference is a negative number, it can be assumed that the self-image has been diminished over time. In

either case, the size of the difference sheds light on the magnitude of change that has taken place (Joseph, 1998).

Although the Momentum score technique has been clinically utilized in both adult and adolescent populations, it was empirically evaluated in the adolescent validity study group (Joseph, 1998). Of the fifty-four adolescents that took part in the AASRS-Piers-Harris validity study, Momentum scores were generated for thirty-nine of the subjects.

In this sample of thirty-nine, eighteen of the subjects manifested positive Momentum scores with an average gain of six points, eighteen produced negative Momentum scores with an average loss of four points, and three subjects had Momentum scores of zero (Joseph, 1998). In comparing the average stressful life events history score (using Section II of the EIQ-3DI) of the subjects in the “positive” Momentum group to the average stressful life events history score of the subjects in the “negative” Momentum group, a t-test for two independent samples indicated a significant difference between the means of the two samples ($t = 2.77$, $df = 34$, $p < .01$) (Joseph, 1998).

The data suggested that the adolescents in the negative Momentum group experienced a significantly higher level of stressful life events than did the adolescents in the positive Momentum group. This outcome supports predictions from both self-consistency theorists and stress researchers. It therefore provides further validation support for the use of the AASRS in adolescent populations. In addition, the study validated the use of Momentum scores as a promising means of evaluating the direction of self-concept changes which is often an issue of great diagnostic importance in adolescence and during transitional periods of adulthood (Joseph, 1998). As was the case

with the Retrospective scores, the Momentum score profile can also be evaluated qualitatively on a criterion-referenced basis.

Self-Concept Scales

Test-retest correlation coefficients and definitions for self-concept will be presented in this section of the literature review utilizing several self-concept scales.

According to the Coopersmith Self-Esteem Inventory manual, self-concept is defined as “the evaluation a person makes and customarily maintains of him- or herself; that is an expression of approval or disapproval, indicating the extent to which a person believes him or herself competent, successful, and significant and worthy.” (Bracken & Mills, 1994) The manual reported a .88 stability coefficient for a five-week test-retest interval, a .42 to .70 for a three- year interval, and a .64 for a twelve-month interval.

The Culture-Free Self-Esteem Inventories Second Edition (CFSEI) defined self-esteem as “a composite of an individual’s feelings, hopes, fears, thoughts, and views of who he is, what she is, what he has been, and what she might become. Perceptions of self-worth tends to be fairly stable and resistant to change (p.15).” The manual revealed .81 to .85 test-retest coefficients for Form A (grades 3-6) and .88 to .96 for Form A (grades 7-9).

The Multidimensional Self-Concept Scale (MSCS) was developed by Bracken in 1992 and denoted self-concept as “a multidimensional and context-dependent learned behavior pattern that reflects an individual’s current behaviors, and predicts an individual’s future behavior (p.16).” The MSCS calculated a .90 test-retest coefficient for

a four-week interval, and the manual reported subscale scores ranging from .73 to .81 (p.16). Similarly, Rotatori (1994) conducted a review of the MSCS and found it to have strong stability and standardization as an instrument utilized to assess self-concept.

The Piers-Harris Children's Self-Concept Scale (PHSCS) produced by Piers in 1984 defined self-concept as a "relatively stable set of self-attitudes reflecting both a description and an evaluation of one's own behavior and attitudes (p.16)." The test-retest coefficients reported by the manual were .42 for an eight-month interval and .96 for a three-week interval.

The Rosenberg Self-Esteem Scale (RSES) clarified as the "totality of the individual's thoughts and feelings having reference to himself as an object (p.16)." Test-retest coefficient scores of .42 and .96 were recorded for both eight month and three week intervals, respectively.

The Self-Description Questionnaires I and II (SDQI and SDQII) originated by Marsh in 1988 and later in 1990, use a comparable operational definition for self-concept as a "person's perceptions regarding himself or herself; these perceptions are formed through experience with an interpretation of one's environment (p.16)." The SDQI noted scores ranging from .27 to .55 for the parent's subscale. In general, the subscales ranged from .51 to .74 for a non-reported interval length. The SDQII's subscaled produced test-retest coefficients that expanded from .72 to .88 for a seven-week interval.

The Tennessee Self-Concept Scale (TSCS) modeled by Roid and Fitts in 1988 failed to define self-concept in its manual, although can be inferred that it's meaning of self-concept conforms with the other definitions provided by the various instruments mentioned in this portion of the review. The TSCS emphasized the multidimensionality

of self and was specifically designed to measure a priori of factors (Marsh and Richards, 1988). Fitts (1965) noted the need for a scale that was “multidimensional in its description of self-concept” and developed the TSCS to meet this need. Bracken and Mills (1994) reported a .92 coefficient for a two-week interval in their examination of this scale.

In their summation of these test instruments, Bracken and Mills (1994) reasoned that most of the definitions were analogous and that the particular terms utilized in those definitions illustrated the same notion.

According to the examiner’s manuals, strong test-retest coefficients seemed to be related to shorter intervals between test administrations. Likewise, increased duration between test administrations resulted in a decline in test-retest scores. Several measures have provided evidence that test-retest reliability for short-term intervals afford stable self-concept constructs over time.

Self-Concept Scales for Cross-Cultural Studies

From the literature (Lambert, 1977) on the role of affective factors on the acquisition of a second language it is concluded that self-concept is directly related to the degree of second language development. Prewitt Diaz (1984) conducted a study to determine the reliability of the Spanish translation of the Self-Esteem Inventory (SEI) with two groups of Puerto Rican students. The purpose of the study was to translate the Self-Esteem Inventory (Coopersmith, 1967) to Puerto Rican Spanish, and to determine if the instrument would be reliable when administered to a group of Puerto Rican high-school students on the island and the mainland. The sample consisted of bilingual high-

school students from Connecticut and San Juan. The Coopersmith Self-Esteem Inventory (SEI) consists of a 58-item self-report inventory concerned with the student's perception in four areas: general self-esteem, social self-esteem, home-parents, school-academic, and an eight-item lie scale (Prewitt Diaz, 1984).

Coopersmith (1967) reported test-retest reliability of fifth and sixth grade students to be .88. There were significant correlations between SEI score $r = .29$ and achievement scores $r = .30$, and sociometric choice $r = .37$. The multiple correlation between sociometric choice and achievement combined $r = .69$ advanced the prediction of self-esteem (Coopersmith, 1967).

The Spanish version (Prewitt Diaz, 1979) has obtained a high reliability with Puerto Rican students on the mainland .89. The Alpha coefficient of reliability of Puerto Rican students on the island was .89 (Colon Colon 1982). Reliability coefficients for all sub-scales were computed for 296 subjects. The sub-scale Alpha reliability coefficients for mainland Puerto Ricans ranged from .507 to .862 for social esteem and overall score, respectively. Island Puerto Rican coefficients ranged from .469 to .854 for social esteem and overall score, respectively. The reliability coefficient for overall scores for both groups were not significantly different ($p = .05$). These results clearly illustrate the SEI to be a reliable instrument in evaluating the personal judgement of worthiness for Puerto Rican students on the island and in the mainland United States (Prewitt Diaz, 1984).

Self-Concept, Adolescence, and Gender

Adolescence is marked by several developmental changes for males and females. First, adolescents must adjust to a changing and maturing body (Peterson, 1987).

Secondly, it is a time when new cognitive structures emerge. Information about the self is now processed in a more abstract and differentiated manner (Harter, 1990). Thirdly, early adolescence has been suggested to be a time of gender-role intensification, a time during which males and females adopt more extreme differences in their activities and self-perceptions (Eccles et al., 1989). The task of utilizing assessment instruments that measure various aspects of physical self-concept have been appropriated by numerous researchers.

Alasker and Olweus (1992) reviewed studies of the stability of self-esteem in adolescence, using the Rosenberg Self-Esteem Scale (RSE) and instruments that are adaptations of the RSE. The studies they reviewed, as well as their own cohort longitudinal study, indicate that global self-esteem remains a fairly stable dimension for short intervals (up to one year) and thereafter the stability of self-esteem declines rapidly (a 2.5-year follow-up study). They found no differences in stabilities between male and females for time intervals up to one year. Their results, however, indicated a somewhat stronger decrease in the stability coefficients for females than for males over an increasing time interval of up to 2.5 years. At the same time, they also found a gradual increase in stability coefficients with age. There was some indication that this increase may be greater for males than for females. Alasker and Olweus (1992) concluded that self-esteem is likely to become more firmly fixed with increasing age.

Lintunen, Leskinen, Oinonen, and Salinto (1995) assessed changes in self-perceptions of fitness, appearance, and self-esteem among adolescents in a four-year follow-up study. Changes across time and changes in the reliability of individual differences (i.e. covariance as test-retest correlations) were examined. Self-esteem was

estimated employing the Rosenberg Self-Esteem Scale, as well as self-assessment questionnaires specifically designed for this study to measure Perceived Fitness and Perceived Appearance. MANOVA –models (SPSS Inc. 1983) and Simplex models within the framework of LISREL-models (Joreskog & Sorbom, 1979,1989) were used in the analysis.

The results among girls were in accordance with the gradual consolidation hypothesis that self-perceptions become more fixed with increasing age. The results of the study indicated reliability coefficients of perceived fitness and perceived appearance for girls to be very high. Likewise, reliability coefficients among the boys were high for both variables, indicating no interaction between sex and age. Similarly, perceived fitness did not differ between the sexes during the follow-up, although increases in perceived fitness were prevalent from ages 11 to 12 ($P=0.001$) and 14 to 15 ($P=0.008$).

Initially, both boys and girls perceived their appearance moderately positively. However, the perceived appearance of the girls thereafter decreased and that of the boys increased, indicating an interaction between sex and age ($P=0.056$).

Girls showed significantly lower self-esteem than boys at ages 12, 13, and 15 ($P=0.046$, $P=0.002$, $P<0.000$). Self-esteem among the boys increased from ages 14 to 15 ($P=0.031$, $P=0.004$, $P=0.001$, respectively) and among the girls from ages 13 to 14 ($P=0.019$). No interaction between sex and age was present.

As mentioned earlier, adolescence is a period of rapid physical growth accompanied by profound emotional and psychological change. It is a time when peer group norms and societal expectations play a major role in the development of self-concept. One cultural expectation of adolescents in the United States is physical

attractiveness, which is partially defined as being thin. This is widely modeled in the media, advertising, and elsewhere; in fact, this “expectation” may be viewed as an indoctrination (Alasker and Olweus, 1992).

A study conducted by Pritchard, King, and Czajka-Narins (1997) examined the relationship between body mass index (BMI) of adolescents, their perceived-weight status and self-concept, controlling for gender, age, and ethnicity. For females, 26% reported themselves as overweight compared with 4.7% classified as overweight based on BMI-weight status. Of those who considered themselves to be overweight, 84.8% would not be so classified using BMI-weight status. Males' perceived-weight status and BMI-weight status were more consistent. For them, 92.2% were classified as normal compared with 88.9% reporting that they were not overweight. Of the males who considered themselves overweight, 63.1% would not be so classified using BMI-weight rank. In relation to predictors of self-concept, BMI values were higher for males than females for all ethnic groups. In general, Pearson correlations between BMI and the self-concept index revealed a negative relationship for males and a positive relationship for females. Essentially, higher BMI was associated with a more positive self-concept for males and a more negative self-concept for females. Predictor variables were regressed on the self-concept index for the total group, males and females. A higher score indicated a more negative self-concept; therefore, a positive regression coefficient represented a positive relationship with negative self-concept. The strongest predictor of a negative self-concept for all groups was perception of overweight status.

The Offer Self-Image Questionnaire for Adolescents (OSIQ) was developed to ascertain feelings and attitudes teenagers have of themselves (Patton & Noller, 1994).

The scaled was based on the following assumptions. First, it is conceivable that a person can master one aspect of the world while simultaneously experiencing difficulty in another. Second, the psychological sensitivity of the adolescent is sufficiently acute that self-description is a valid basis for measurement (Patton & Noller, 1994).

The OSIQ measures five aspects of self-concept: Psychological Self; Social Self; Sexual Self; Family Self; and Coping Self. Within these five aspects of the self, there exist an additional eleven subscales. Questions on the OSIQ are stated in both positive and negative terms; and the questions require subjects to rate their answers on a scale from 1 to 6, where 1 denotes the question as describing them very well and 6 describing them not at all. This resulted in scores with positive adjustment regarding low raw scores and poor adjustment yielding high raw scores (Patton & Noller, 1994).

Marsh, Richards, Johnson, Roche, and Tremayne (1994) conducted a study to assess the physical self-concepts of adolescents by focusing on three multidimensional physical self-concept instruments: the Physical Self-Perception Profile (PSPP); the Physical Self-Concept scale (PSC); and the Physical Self-Description Questionnaire (PSDQ). The PSPP measures four physical subscales that include bodily attractiveness, sports competence, physical strength, and physical conditioning/exercise, as well as global self-worth scale. The PSC contains seven subdomains that consist of body build, appearance, health, physical competence, strength, action orientation, and overall physical satisfaction. Eleven scales constitute the PSDQ. They are strength, body fat, activity, endurance, sports competence, coordination, health, appearance, flexibility, general physical self-concept, and self-esteem.

Marsh et al. (1994) reported the test-retest correlations for the PSC were just below the .80 level for a three-week interval. For males between the ages of 10 and 20, physical self-concept remained stable. Females were found to be systematically lower for all ages after the age of 12. Reliability information was not presented for the PSDQ or the PSPP.

Self-Concept, Adolescence, and Gender Across Cultures

A study conducted by Heng-Keng Chiam sought to ascertain whether the self-concept of Malaysian adolescents changes with age in the various components of the self-concept. The Tennessee Self-Concept Scale (TSCS) was used to measure the nonacademic aspects of the self-concept, while the Brookover Scale of Ability assessed the academic aspect. Both instruments were modified and validated for Malaysian adolescents (Chiam, 1976). The five sub-scales contained within the TSCS include: Physical Self (PYS), Moral-Ethical Self (MES), Personal Self (PES), Family Self (FMS), and Social Self (SOS). Together, they constitute the nonacademic self, which is termed Self-Esteem (SE).

In the area of nonacademic self, the scores of the younger boys are consistently lower than scores of the older boys. The trend in academic self-concept of the boys was inconsistent. No obvious trend in the development of the nonacademic self-concept was discernible in the girls' sample. The differences in academic self-concept between the three groups of girls were insignificant. These findings support the hypothesis that

adolescent's self-concept should improve with age, with boys, more so than girls, changing in the direction predicted.

In a study of Australian students, O'Dea and Abraham (1999) examined the effects of interactions of gender, pubertal status, and body weight on self-concept. Self-concept was determined using the Self-Perception Profile for Adolescents (Harter, 1988), a multidimensional instrument that measures different aspects of self-concept. Scores were based on the following sub-scales: Scholastic Competence, Social Acceptance, Athletic competence, Physical Appearance, Job Competence, Romantic Appeal, Behavioral Conduct, Close Friendship, and Global Self-Worth. The mean self-concept scores of the eight sub-scales for prepubertal and postpubertal males were not significantly different (2.71 ± 0.43 vs. 2.76 ± 0.36 , respectively), but they were for premenarcheal and postmenarcheal females (2.75 ± 0.37 vs. 2.63 ± 0.37 , respectively; $p < .05$). Postmenarcheal females retained low scores while post pubertal males maintained high scores. Regarding the Global Self-Worth sub-scale, there were no significant associations or interactions with the covariates. However, there was a significant difference between males and females on their discrepancy scores (-2.67 ± 0.55 vs. -3.67 ± 0.87 , respectively; $p < .01$). There were no significant three-way interactions for age, gender, puberty, and standard body weight. The results of this study are similar to the results of previous studies that have separately examined the effect of gender (Marsh, 1989; Harter, 1988), puberty (Blyth et al., 1981; Brooks-Gunn, 1984; Alsaker, 1992; Folk, Pedersen, & Cullari, 1993), and body weight (O'Dea & Clampett, 1995; Mendelson & White, 1982; Drake, 1988). Male students in general have greater self-esteem than do female students. However, females were found to have higher self-

concept regarding the ability to form close friendships. The poorer self-concept of the female students was also reflected in the significantly lower discrepancy score (O'Dea and Abraham, 1999).

Academic Self-Concept Scales

During the past twenty years, educators have become increasingly interested in academic self-concept. Several studies have documented the relationship between various aspects of self-concept and achievement for high-school students (Marsh, 1990, 1992). Research has also demonstrated the multidimensionality of self-concept (Caracosta & Michael, 1986; Marsh, 1990,1992; Marsh & Holmes, 1990).

A study by Byrne and Worth Gavin (1996) focused on the academic component of the Shavelson Model. The purpose of the study was fourfold: (1) that academic self-concept structure is multidimensional, (2) that academic self-concept structure is hierarchically ordered, (3) that direction of influence flows from actual behavior (e.g. academic performance) at the base of the model upward to general self-concept at the apex of the model, and (4) that academic self-concept becomes increasingly differentiated with age. The four facets of self-concept relevant to the study (General, Academic, English, and Math) were measured by means of appropriate sub-scales form the Self Description Questionnaires (SDQ's) SDQ-I, SDQ-II, and SDQ-III (Marsh, 1992a, 1992b, 1992c,respectively). Of substantial importance is the fact that these instruments were developed within the theoretical framework of the Shavelson Model; each SDQ measure

targets a particular age group. Exclusively, they are Grades 2-6, Grades 7-11, and Grades 11-college. All three incorporate a Likert scaling format.

Based on analysis of covariance structures, findings substantiated the multidimensionality of academic self-concept. The results of analysis also determined minor deterioration of hierarchical structure for early and late adolescents. The test results revealed direction of predictive flow, whether from academic achievement to general self-concept, or the reverse, to yield equally appropriate models for each age group. Consistent with Marsh's research (1989, 1990b, 1993b), Byrne and Worth Gavin (1996) were unable to determine any clear pattern of increasing differentiation among self-concept facets across age. The evidence divulged in this study adds to the growing body of support for a multidimensional and hierarchical ordered self-concept instrument.

Another study relating to academic self-concept is the Personal and Academic Self-Concept Inventory (PASCI), which operationalizes Shavelson's hierarchical, multifaceted model (HMFMM; Shavelson, Hubner, and Stanton, 1976). It is an expanded version of Fleming and Courtney's (1984) Self-Rating Scales (SRS); that were an extended representation of Fleming and Watts' (1980) scales, which in turn were an outgrowth of the Feelings of Inadequacy Scale (Janis and Field, 1959). The PASCI embodies seven subscales that include self-regard, social acceptance, math ability, verbal ability, physical appearance, physical ability, and social anxiety.

Scale reliabilities (internal-consistency and test-retest measures) were examined, as were the correlations of PASCI scales with the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) and the Fenigstein, Scheier, and Buss (FSB; 1975) scales for public and private self-consciousness and social anxiety (Fleming & Whalen, 1990).

The PASCI scales contained labeled extremes that resembled a Likert format of positively and negatively worded items. The correlation of PASCI social anxiety with FSB social anxiety ($r = -.80, p < .001$) was the highest of all correlations. The largest correlation of the RSES with the PASCI was .74, for self-regard. This is notable because both scales are measures of global self-esteem. No interaction was found between gender and sample, although gender differences were found for Math Ability, ($p < .001$) and Physical Ability ($p < .001$) in the predicted direction (i.e., females lower). The differences between cross-sectional high school and college samples are difficult to interpret. The finding that Self-Regard is greater for the college students is consistent with previous research (Bachman and O'Malley, 1983).

Another measure of academic self-concept was developed by Michael and his colleagues and is titled the Dimensions of Self-Concept (DOSC) Forms E, S, and H for elementary, secondary, and higher education, respectively (Michael & Smith, 1976; Michael, Smith, and Michael, 1989). Subsequently, Japanese (Paik & Michael, 1999) and Portuguese (Villar, Michael, & Gribbons, 1995) versions of the DOSC Form H were developed. However, these measures will be discussed later in the cross-cultural portion of the academic self-concept scales review. Each of the instruments has five sub-scales that measure the hypothesized constructs corresponding to Level of Aspiration (LOA), Anxiety (ANX), Academic Interest and Satisfaction (AIAS), Leadership and Initiative (LAI), and Identification vs. Alienation (IA).

The purpose of the investigation was to obtain evidence of internal consistency reliability and construct and criterion-related validity of the DOSC, Form H scores for students at risk of experiencing academic difficulties (Michael et al., 1995).

Item analysis and estimates of internal-consistency reliability of scores were obtained by correlating scores on individual items with total scores on each of the five subscales. Internal-consistency reliability computations using coefficient alpha were .90, .89, .84, .85, and .83 for LOA, ANX, AIAS, LAI, and IA sub-scales, respectively. The factor intercorrelations in this model involving the higher order factor, LAI, and IA, which ranged from .5 to .8, indicated that a strong relationship between these factors did exist (Michael et al, 1995). However, the pattern of factor intercorrelations involving the ANX factor was not consistent across other factors. Only the correlation between ANX and LAI, -.35 was significantly different from zero, $z = -.37$, $p < .05$. This correlation indicated that a modest relationship must exist between ANX and LAI independent of the relationships with ANX and LAI factors with the general academic self-concept factor.

Academic Self-Concept Scales Across Cultures

The twofold purpose of the study conducted by Paik and Michael (1999) was to obtain evidence of the internal consistency reliability and construct validity of scores on each of the five dimensions of a Japanese version of the academic self-concept scale mentioned in the previous review: Dimensions of the Self-Concept (DOSC), Form S, Japanese version.

Intercorrelations of scores on the five factor sub-scales of the DOSC, Form S, Japanese version, were obtained along with internal consistency estimates of reliability scores for the 354 high school participants. Estimates of the internal consistency reliability of scores for the 14-item five factor sub-scales of LOA, ANX, AIAS, LAI, and

IA were .84, .71, .73, .84, and .77, respectively. These alpha coefficients were somewhat lower than any of those reported in the earlier studies. Within each factor sub-scale, correlations of each item with the total score of the subscale of which it was an intended member ranged from .35 to .70 for LOA, from .27 to .58 for ANX, from .31 to .61 for AIAS, from .29 to .73 for LAI, and from .31 to .59 for IA. All coefficients were statistically significant and were corrected for any overlap (Paik & Michael, 1999). The intercorrelations of scores on the factor subscales ranged from -.29 to .57. The values of the two highest correlation coefficients were .57 and .53 for scores between the AIAS and LAI sub-scales and the LOA and IA sub-scales, respectively. The values of the two lowest correlation coefficients were -.29, observed between scores on the ANX and AI sub-scales, and -.05, which occurred between scores on the ANX and AIAS sub-scales. The ANX sub-scale scores reflecting negative affect had negative or approximately zero correlations (.00, .05, -.02, -.29). Among the four factor sub-scales that portrayed a positive affect, the intercorrelations of scores varied between .34 and .57. The results presented in this study afford promising support for the reliability as well as for the multidimensionality of the DOSC, Form S, Japanese version. The statistical outcomes would suggest that for the female sample of Japanese students, the DOSC, Form S, Japanese version, was indeed a multidimensional scaled reflecting self-concept constructs in a high school setting (Paik & Michael, 1999).

For further evidence regarding the internal consistency reliability and construct validity of a Portuguese version of an academic self-concept scale, Villar, Michael, & Barry (1995) developed DOSC, Form H from data afforded by a second sample of Brazilian students.

Intercorrelations of scores on the five factor sub-scales of the DOSC, Form H, Portuguese version, were obtained along with internal consistency estimates of reliability scores for the 177 college participants. Estimates of the internal consistency reliability of scores for the 14-item five factor sub-scales of LOA, ANX, AIAS, LAI, and IA were .88, .90, .84, .84, and .85, respectively. The intercorrelations of scores on the factor subscales between LOA and ANX, AIAS, LAI, and IA were -.27, .77, .38, and .42, respectively. Correlations between the ANX factor and AIAS, LAI, and IA factors were -.09, -.51, and .08, respectively. Correlations between the AIAS and LAI sub-scales and the AIAS and IA sub-scales were .63 and .40, respectively. The correlation between scores on the LAI and IA sub-scales was .11.

The following conclusions were evident from the data analysis:

1. The scores obtained on the five subscales of the Portuguese version of the DOSC, Form H appear to register satisfactory level of internal consistency reliability.
2. The evidence derived from exploratory and confirmatory maximum likelihood factor analysis has lent support for the construct validity of the Portuguese version of the DOSC, Form H.
3. The information provided in this study, along with other investigations involving the Japanese version (Paik & Michael, 1999), and the three English version, (Michael et al, 1989) has indicated an ever-increasing likelihood of the multidimensionality of the academic self-concept in diverse cultures.

Adolescent Self-Concept and The Role of Family and Peers

The role that family plays in the development of children can have profound effects on self-concept. Parental attachment and reciprocity can influence the way adolescents perceive themselves, interact socially, and strive for academic achievement. However, during adolescence, attachment behavior is also directed toward non-parental figures (Weiss, 1982). In Weiss's view, a particularly important aspect of adolescence is peer attachment; mainly because of the peer's ability to support and encourage the adolescent's assumption of growth-promoting challenges.

In the following study, Armsden and Greenberg (1987) examined the general affective/cognitive dimensions of attachment to parental and peer figures. They hypothesized the the "internal working model" of attachment figures may be tapped by assessing (1) the positive affective/cognitive experience of trust in the accessibility and responsiveness of attachment figures, and (2) the negative affective/cognitive experiences of anger and/or hopelessness resulting from unresponsive or inconsistently responsive attachment figures.

The study aimed to (1) develop a more comprehensive and reliable measure of attachment the at is multifactorial, and (2) to attempt to use this measure to examine the role of security and attachment in late adolescence (Armsden & Greenberg, 1987).

The Inventory of Parent and Peer Attachment (IPPA) was developed in a study that utilized two samples of undergraduate students. The subjects completed a questionnaire formatted on a 5-point Likert scale.

The Pearson correlations between the six parent and peer scales were significant at the .01 significance level or less. Parent scales were more highly related to each other than they were to the peer scales. Trust and Communication scores were highly correlated within both parent ($r = .76$) and peer ($r = .76$) measures. Corresponding parent and peer scales were not as strongly related; the coefficient obtained for the Trust scales was .33, for the Communication scales, .29, and for the Alienation scales, .47.

The patterns of factor loadings suggest a partial confirmation of the notion of positive and negative affective/cognitive dimensions of attachment. However, the intercorrelations among the factor-based scales suggest that these factors are not independent as assessed with the current item content (Armsden & Greenberg, 1987).

Attachment to parents and peers during adolescence and their relationship with self-image was also explored by O’Koon (1997). The purpose of the study was to investigate the effects of attachment relationships on self-image in adolescence. He proposed three hypotheses: (1) Parent and peer attachment will have a positive relationship with self-image in adolescence. The relationship of parent attachment to self-image will be stronger than peer attachment. (2) Some independent relationships of Mother, Father, and Peer attachment with self-image will exist. (3) Females will show stronger peer attachment than will males. Males will show stronger self-image across areas of adjustment (O’Koon, 1997).

O’Koon (1997) found that: attachment had a positive impact on adolescent self-image scales; attachment to Mother, Father, and Peers had a significant positive relationship with Emotional tone; Peer attachment was significantly correlated with scales that gain prominence during this developmental stage; attachment to Mother and father

significantly related to global aspects of well-being; females had a significantly higher level of attachment to peers than did males; and males had higher scores on each of the scales of adjustment. In general, the hypotheses proposed were all substantiated by the results of this study.

Wintre, Yaffe, and Crowley (1995) performed a study in accordance with the development of a scale, the Perception of Parental Reciprocity Scale (POPRS) that characterizes adolescents' perception of mutual reciprocity in their relationships with parents. The theoretical bases for such an instrument emerged from Youniss's (1978; 1980) social relations theory which surmises that the reciprocal structure of parental relations assist development of awareness and acceptance, while peer relations facilitate respect for fairness and mutual concern for others (Youniss, 1980).

The test incorporated three sub-scales. Respectively, they are: a) the general parent/child relationship, b) the specific relationship with the mother, and c) the specific relationship with the father. Selected items for the POPRS were based on corrected item-total correlation and Cronbach's alpha coefficient. Additional scales included self-esteem (Rosenberg, 1965), locus of control (Levenson, 1974), and consultant choice (Wintre et al., 1988).

The corrected item-total correlations used to select the items ranged between .26 and .65. The impressive alpha reliability coefficients and the mean inter-item correlations of the overall scale and the sub-scales revealed strong positive and highly significant correlations. Interestingly, there were no significant differences according to sex ($t = .22$, $p = .823$), or age ($r = -.16$, $p = .07$) with regard to overall POPRS scores or sub-scale scores. Greater reciprocity in the parent-child relationship was significantly correlated

with higher self-esteem, in spite of the fact that positive self-esteem depends on factors other than just reciprocity in parental relationships (Wintre et al., 1995). The significant relationship established between the POPRS and internal locus control is reflective of the emergence of a sense of personal autonomy. Regarding consulting choice, individuals with perceived high reciprocity in parent-child relationships would consult more frequently with adults in general, and with familiar adults.

Adolescent Self-Concept and The Role of Family and Peers Across Cultures

In a study conducted by Leung and Leung (1992), influence of self-concept and relationships with parents and school on life satisfaction of adolescents was explored using a sample of Chinese junior high school children. Adopting the multidimensional approach, self-concept was measured globally as well as in four specific aspects, namely, academic ability, social ability, physical ability, and physical appearance. All correlations but two (Relationship with School/Physical Appearance and Relationship with School/Physical Ability) were significant at the .01 level. All four self-concept components were highly correlated among one another ($r = .32 - .47$) and also highly correlated with the general self-concept ($r = .33 - .55$). In comparison, Relationship with Parents was only moderately correlated with the four dimensions of self-concept ($r = .13 - .27$) while relationship with School showed even lower correlations ($r = .04 - .12$). These results replicated those obtained by Leung and Lau (1989), who observed similar correlation patterns using the same scaled. Such consistency provide further support for the reliability of this set of scales for assessing self-concepts in Chinese adolescents as

well as the implication that family/parents play a comparatively more important role than school in affecting the self-concept of adolescents.

Summary

The definitions of 'self-concept' are mostly centered around the ideas that perceptions of the 'self' remain constant and that there is an evaluative process that takes place in forming one's self- concept. Regardless of the various terms utilized in this domain, the construct being measured is the equivocal. As the research has displayed, self-concept is at the core of a person's personality. It retains influence in practically every aspect of life.

The reviews of the JPPSST disclosed similar conclusions. The test was praised as one of the best test instruments available for measuring the self-concepts of children. In addition, it was found to have strong test-retest reliability and good predictive ability.

The scale validation studies of the AASRS provided strong empirical support in establishing construct and criterion-related validity for the use of the test as a self-concept measure in both adolescent and adult populations.

The reviews of Self-Concept scaled yielded favorable results for most instruments. All of the tests presented defined the construct of self-concept in a similar fashion. The test-retest reliability coefficients ranged from .70 to .90 for most global categories. The time interval between test administrations displayed variability in the construct. The shorter duration periods afforded stronger test-retest scores, while longer intervals yielded lower resulting coefficients. This finding gives plausibility to the

concern of long term stability of self-concept. Results of the studies in this review would indicate that self-esteem is likely to become more firmly fixed as age increases.

With regard to the reliability studies that encompassed domains of gender, age, academics, and parent/peer influence, most theorists integrated multidimensionality, evident in the formulation of several sub-scales within each test. Physical concept scales verified interactions between the sexes. Males were found to have higher self-concepts on most sub-scales, although increased self-concept was positively correlated with increased age for both males and females. Results of academic self-concept instruments have afforded credibility to the notion that these tests are of considerable importance for purposes of early identification of students experiencing academic difficulties. Likewise, if the outcomes of cross-cultural studies related to academic performance are shown to be generalizable, the instrument could be used with more diverse groups of students for purposes of early academic intervention. Attachment to parents and peers proved influential in the development of self-concept for adolescents. Evident from these studies is the role family functioning has in determining levels of self-concept through facilitating, or hindering, the development of identity.

Chapter Three: Design of the Study

Sample

The sample used for this study consisted of thirty-one college students. Their ages ranged from eighteen to twenty years. All subjects were taken from two sections of a mandatory basic college math course. The institution resides in a suburban community located in Southern New Jersey. The community consists of lower-middle to upper-middle class families.

Measure

This study was a reliability study of the Adolescent and Adult Self-Concept Retrospective Scale (AASRS). This retrospective scale represents a unique approach to the assessment of self-images in older subjects and taps the same theoretical dimensions measured in its predecessors, the Joseph Preschool and Primary Self-Concept Screening Test (JPPSST) and its first revision, the Joseph Self-Concept Scale for Young Children (JSSYC). However, the AASRS features an expanded and improved form. Whereas the JPPSST and the JSSYC ask young subjects to indicate which drawing of a dichotomous set of pictures they identify most with, the AASRS asks adolescents and adults to make the same distinctions but with one important twist. The older subjects, though responding

to the same items, must answer each question had they been administered the scale at age seven.

The instrument itself has two sections. The preschool-primary age is the first section, and is intended for use with preschool age subjects ranging from three to seven years of age. The second section is named the preadolescent section, and is intended for use with subjects seven years old or older. This second form of the scale is the one being administered in this study with the additional instructions for subjects to respond in retrospect.

The second section consists of thirty self-concept situation items with corresponding pictorial designs. An interview format between examiner and examinee is employed, with the examiner choosing to be situated either next to, or across from, the examinee. The section utilizes dichotomous picture sets that accompany the items and are primarily used as visual references for the questions. The thirty items of the second section also include four Distortion Index items that are scored separately. The nine stimulus card pictures that are utilized for the section are included in each stimulus booklet after the preschool-primary cards but are preceded by a yellow page divider. Each age edition of the test offers a set of boy and girl minority cards that are identical to the standard counterparts but feature darker skin and hair shading. The choice of whether to use the standard stimulus cards versus the minority cards is based on the examiner judgment regarding which set of cards each subject is more likely to identify with.

The administration of the test began with the gathering of background information from the examinee. Their gender, age, grade level, ethnicity, and parental education level were all recorded on the top of the record form scoring key. The examiner then read the

directions to the subject. After reading the directions, the examiner then read each of the thirty items to the subject from the preadolescent record form and proceeded with a statement that reminded the subject to respond as if they were seven years old. The appropriate responses were then circled on the record form in pencil. For each of these items, the examiner simultaneously presented the verbal portion of the administration while pointing to the stimulus card on the subject's left as the first option. The second option for each item was read while pointing to the card on the subject's right. The scoring options were two-point scores for positive responses, zero-point scores for negative responses, and one-point scores for ambivalent responses that were indicated by question marks. The Distortion Index items (numbers 7, 14, 21, and 28) were summed and range from zero to eight points. A global score for the section was derived from summing the points awarded for the twenty-six items (excluding Distortion Index items). Global scores range from zero to fifty-two points and can be calculated from the scoring key.

Design

This study was a correlational design test-retest reliability study of the AASRS. The researcher administered the preadolescent section of the original form of the AASRS, the JSSYC, with instructions for subjects to answer retrospectively. The Global and Distortion Index scores obtained were calculated by the previously mentioned procedure. Then, a one-week interval was employed between the first administration of the test and the second administration of the same test. The resulting scores from the first

and second test administrations were then compared for each individual in the sample. The resulting correlational coefficient was then used to determine which hypothesis was accepted. The correlational coefficient was determined by using the Pearson product-moment correlation procedure, which calculated the correlation coefficient. The resulting Pearson correlation coefficient was considered significant at the .05 level of confidence.

Analysis

This study was a correlational study to establish the test-retest reliability of the AASRS. The reliability coefficient is the correlation between scores obtained by the same subject on the two administrations of the test. It was assumed that the AASRS is a valid test for objectively assessing the self-concept levels for age groups targeted by this test. In addition, it was assumed that the short interval between test administrations would not affect the scores of the examinees by creating a pattern of responses through memory or social desirability, thereby negatively influencing the analysis employed by this study.

Hypotheses

Null hypothesis: The Adolescent and Adult Self-Concept Retrospective Scale does not yield statistically significant test-retest reliability coefficient scores for this population sample.

Alternate hypothesis: The Adolescent and Adult Self-Concept Retrospective Scale does yield statistically significant test-retest reliability coefficient scores for this population sample.

Summary

This study followed the standard procedure used when conducting a test-retest reliability study. Two administrations were conducted with a consistent one-week interval between them for all subjects in this sample. The resulting reliability coefficient was then used to establish one measure of reliability for the AASRS.

8.

Chapter Four: Analysis of Results

A test-retest reliability coefficient for the AASRS was established by testing thirty-one college students. The subjects ranged from eighteen to twenty years of age. They were tested twice through the administration of the AASRS with a one-week interval between administrations. It was hypothesized that the AASRS would yield a statistically significant reliability correlation coefficient at a .05 level of confidence. The null hypothesis stated: The Adolescent and Adult Self-Concept Retrospective Scale does not yield statistically significant test-retest reliability coefficient scores for this population sample.

The scores obtained for each individual after two separate administrations of the AASRS were then analyzed using the Pearson product-moment correlation coefficient statistical procedure. This procedure yielded a correlation coefficient for the thirty-one subjects tested.

After analyzing the resulting correlation coefficients, it was determined that the null hypothesis would be rejected and the alternate hypothesis would be accepted. Through analysis of this experiment it can be said that the Adolescent and Adult Self-Concept Retrospective Scale does yield favorable test-retest reliability coefficient scores for this population, and the AASRS can be considered a reliable test instrument.

The Pearson product-moment correlation statistical procedure resulted in a .867 correlation coefficient for the Global Index for the thirty-one subjects tested. This was found to be significant at the .01 level of confidence (see figure 4.1). The mean for the

first administration of the AASRS was 39.323, and the standard deviation was 8.002. The second administration of the AASRS resulted in a mean of 40.323, and a standard deviation of 8.475 (see figure 4.2).

The Distortion Index Pearson correlation for the thirty-one subjects tested in this study was found to be .834. This was significant at the .01 level of confidence (see figure 4.1). The mean score for the first administration of the AASRS was found to be 5.645 (see figure 4.2). This shows the overall Distortion Index score to be favorable when analyzing the truthfulness of test scores obtained from this sample. The mean score for the second administration of the AASRS was found to be 5.419. This once again shows an overall truthfulness in answering by the subjects tested in this study.

There was only one instance, out of thirty-one occasions, where the Distortion Index score by an individual varied by more than two points between administrations. Considering that each question had possible values of 0,1,or 2 points, respectively, there was very little fluctuation within individuals between administrations.

There were only two instances, out of thirty-one occasions, where the Global Index scores by an individual varied by more than five points from the first to second administration. With the exception of six instances, the change in category placement was in a positive direction. Both Global Index scores and Distortion Index scores correlated in a positive direction (see figures 4.2 and 4.3, respectively).

Figure 4.1

Correlations

Correlations

		GLOBAL1	GLOBAL2	DIST1	DIST2
GLOBAL1	Pearson Correlation	1.000	.867**	-.319	-.144
	Sig. (2-tailed)	.	.000	.080	.440
	N	31	31	31	31
GLOBAL2	Pearson Correlation	.867**	1.000	-.367*	-.251
	Sig. (2-tailed)	.000	.	.042	.174
	N	31	31	31	31
DIST1	Pearson Correlation	-.319	-.367*	1.000	.834**
	Sig. (2-tailed)	.080	.042	.	.000
	N	31	31	31	31
DIST2	Pearson Correlation	-.144	-.251	.834**	1.000
	Sig. (2-tailed)	.440	.174	.000	.
	N	31	31	31	31

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Figure 4.2

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
GLOBAL1	31	22.00	52.00	39.3226	8.0016
GLOBAL2	31	17.00	54.00	40.3226	8.4750
DIST1	31	.00	8.00	5.6452	2.0420
DIST2	31	.00	8.00	5.4194	2.2624
Valid N (listwise)	31				

Figure 4.3

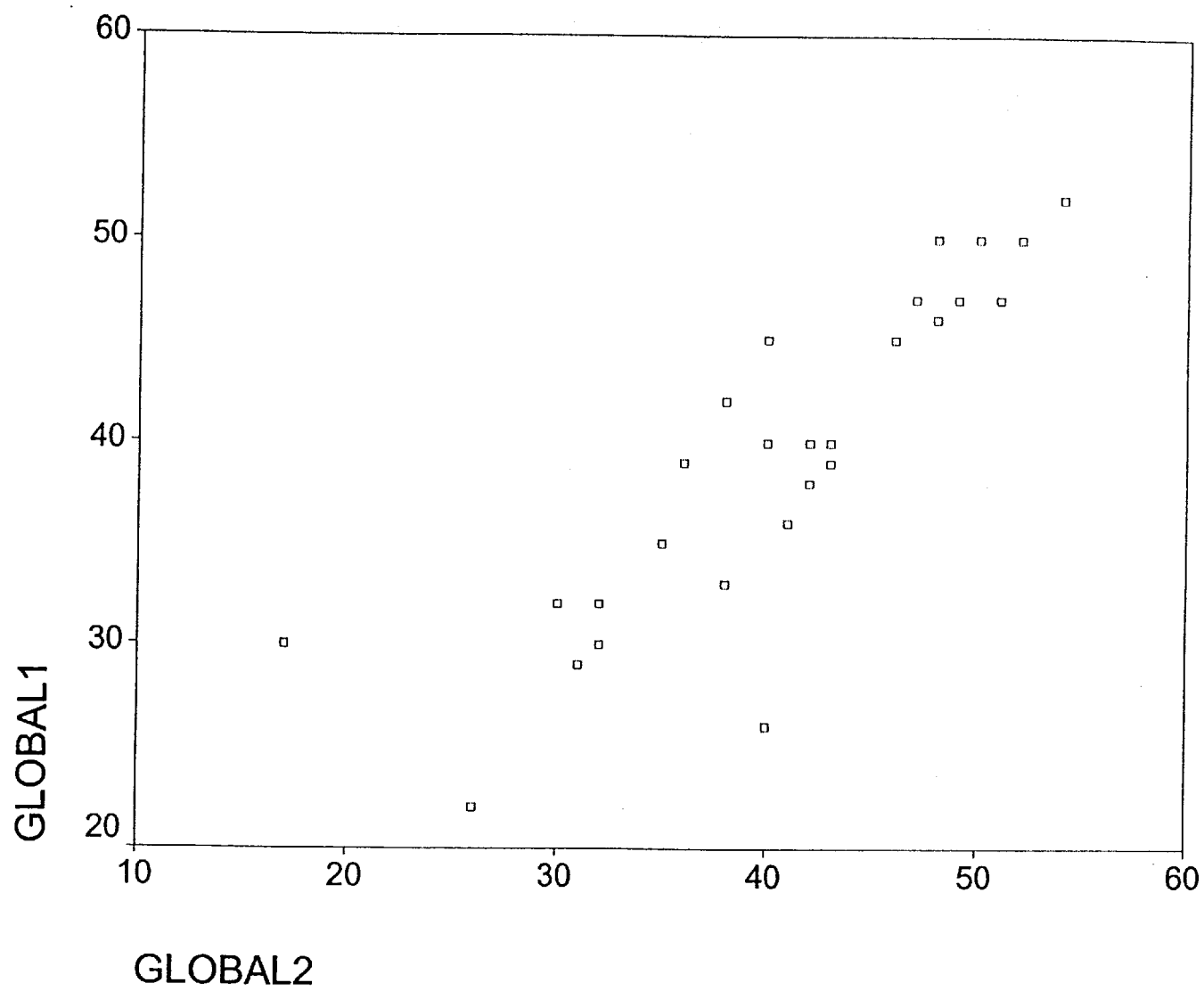
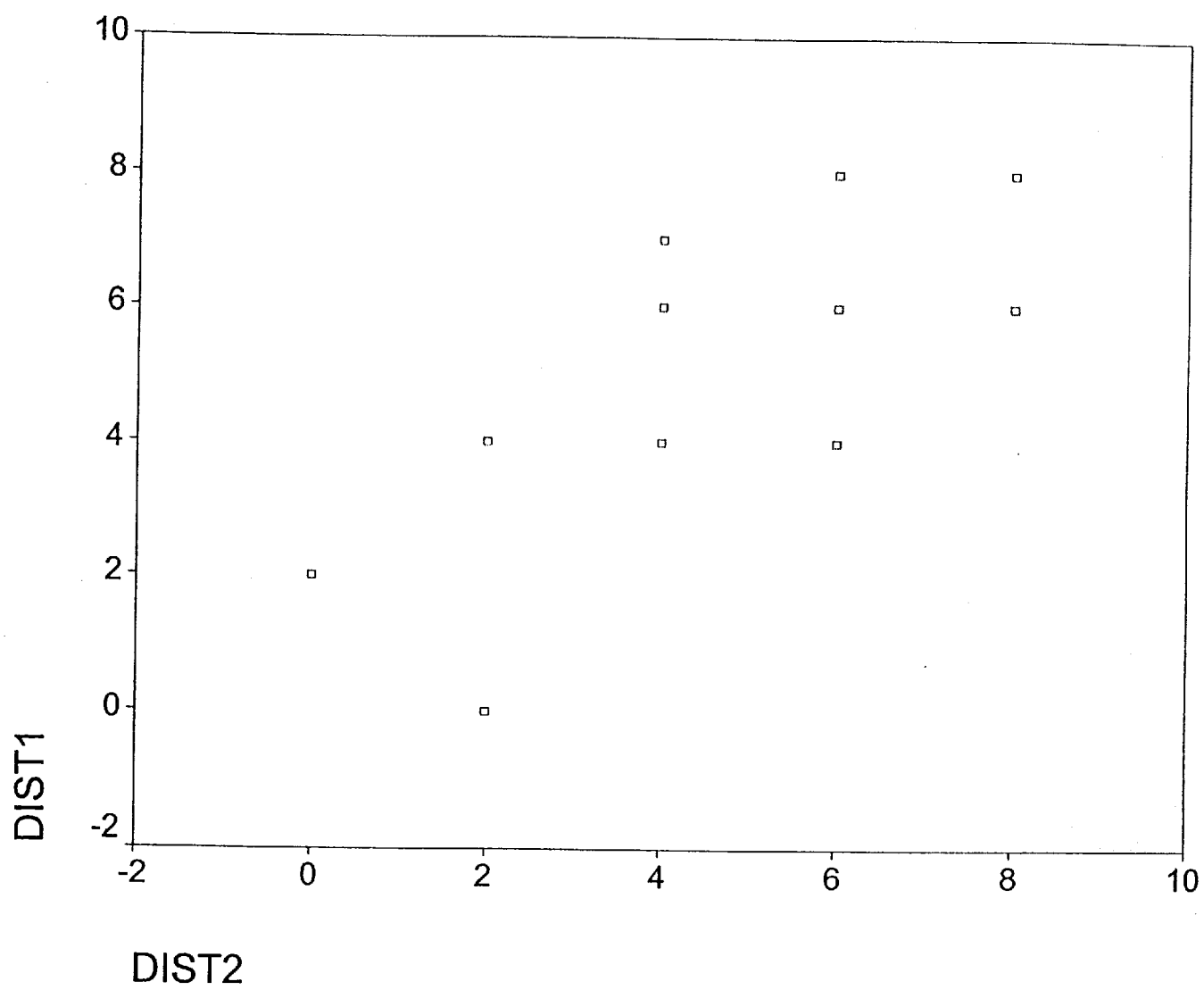


Figure 4.4



Chapter Five: Summary, Conclusions, and Discussion

Summary

The emergence of a device that attempts to acceptably measure the self-concept levels of adolescent and adult populations would significantly contribute to the fields of education and psychological evaluation. Dr. Jack Joseph has occupied the task of developing such a test. A revised version of the Joseph Self-Concept Scale for Young Children (JSSYC), the Adolescent and Adult Retrospective Self-Concept Scale (AASRS) serves to objectively screen and identify self concept levels of older populations. The purpose of this study was to determine test-retest reliability for the AASRS as a contribution to Dr. Joseph's revision of the scale.

As work by previous researchers has shown, self-concept has been found to be a relatively stable personality attribute. However, self-concept is not entirely resistant to change. It develops in a progression and is susceptible to change throughout one's life, although it does remain stable in the short-term. This should lend support to the reliability of a self-concept instrument's stability.

The design of the study was correlational. The Pearson product-moment correlation was used to determine the correlation coefficient for the sample used. It was hypothesized the AASRS would have favorable test-retest reliability. The results of the analysis were in accordance with this prediction. The Global and Distortion Indexes reliability coefficients were found to be significant at the .01 level. The study had set the

confidence level at .05. The AASRS was determined to be a reliable instrument for the assessment of self-concept.

Conclusions

As previously mentioned, the results of this study were extremely commendatory. The correlation between test administrations for the Global score was found to be .867. This result is notably high, and was the determining factor for which hypothesis was accepted.

The correlation between test administrations for the Distortion Index was found to be .834. This score was almost equivalent to the Global score obtained. It's significance illustrates an acceptable level of relationship.

The Global scores for each individual, obtained from the two administrations, only changed categories in two instances. With the exception of six instances, the change in category placement was in a positive direction. Therefore, only six of the thirty-one subjects displayed a negative shift in self-concept.

The findings of this study are in accordance with the available research. Self-concept was found to be relatively stable in subjects. The AASRS, in comparison to other self-concept measures, was determined to have as good, if not better, test-retest reliability.

Discussion

The AASRS faired extremely well in comparison to other self-concept measures. It's correlation coefficients were consistent with those reported by Bracken & Mills

(1994) in their review of self-concept instruments. Strong empirical support in establishing both construct and criterion-related validity for the use of the AASRS as a self-concept measure in adolescent and adult populations was provided by three validation studies. The purpose of these studies was to establish a theoretical organizing structure for the AASRS.

Prewitt Diaz (1984), Alasker and Oweus (1992), Pritchard et. al. (1997), Patton and Noller (1994), Paik and Michael (1999), and Armsden and Greenberg (1987) are just a few of the test developers mentioned in this study that have structured instruments similar to the AASRS. The test-retest interval used for this study was shorter in duration than most of the previously mentioned tests, however, it still imparts sentiment to the notion that self-concept is a relatively stable construct.

The sample used in this study constituted adolescents and adults. Adolescent and adult populations are less likely than younger samples to display fluctuations in self-concept, according to this researcher. The former are more commonly set in their ways and have a greater understanding of themselves, which would result in greater resistance to change. That is not to say that change is not at all plausible during late adolescence and early adulthood, it is just more likely to evolve in a progressive manner toward a more positive or more negative orientation.

As the results of the test administrations were being analyzed, the researcher noticed that there was little fluctuation within individuals between test administrations for both the Global and Distortion Index scores. Also, most variations in test scores were positively directed, lending credence to the idea that older subjects usually experience change in self-concept in either a positive or negative direction.

This researcher also observed similarities among ambivalent responses. There were certain questions that appeared to fall into this category on a more frequent basis. It would behoove the test developer to reexamine the practicality as well as the applicability of these questions as they pertain to older test subjects.

The results of AASRS are encouraging for future endeavors in this field of study. This scale represents a unique approach to the assessment of self-images in older subjects and as verified by this study is reliable in doing so. The refinement of this measure is a huge step forward in understanding the self-concepts of older populations. It is heavily anticipated that future research in this area will continue and that an understanding of the self-concept construct will be affirmed.

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