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A Comparison of Two Self-Conception Disparity Methods as Operationalized within an Adolescent Population

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A COMPARISON OF TWO SELF-CONCEPTION DISPARITY METHODS AS OPERATIONALIZED WITHIN AN ADOLESCENT POPULATION

by

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ABSTRACT

A Comparison of Two Self-Conception Disparity Methods
as Operationalized Within an Adolescent Population

by

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It is posited that self-conception disparity is the amount of difference between an individual's ideal self-conception and his or her real self-conception. Such a postulation arises directly from the literature wherein the self-concept is conceptualized as a multitude of self-conceptions an individual has. During the evaluative phase (i.e., the comparison of the ideal self-conception against the real self-conception), an image (self-image) of one's self is evoked. This self-image is associated with an affective response referred to as self-esteem.

Two methods of computing self-conception disparity are compared and contrasted: (a) the often-used Subtraction-Absolute Value Method and (b) a ratio method based on the work of James (1890) conceptualizing self-esteem as the quotient of one's successes to his or her pretensions.

Results of the study indicate that the two methods share only a minimal amount of common variance, thus suggesting that they are either

not measuring what they purport or that they may be accounting for different phenomena relative to self-esteem. In comparing the two methods for their ability to predict common external variables that have been correlated with self-esteem, the results indicate that the Ratio Method accounts for a greater proportion of the variance than does the Subtraction-Absolute Value Formula.

While more research is certainly needed to ferret out the question regarding which method of calculating self-conception disparity is of greatest utility, the results of this study suggest that the Ratio Method appears to lend itself more accurately to conceptualizing the nature of self-conception disparity.

(114 pages)

INTRODUCTION

Self-concept, a hypothetical construct inferred from behavior, has been the subject of query from the earliest recorded history (Blumer, 1969; Openshaw, 1978). Since James (1890) incorporated feelings and attitudes and a principle of causality in our view of the self, theorists have established and elucidated their own individual epistemological frameworks. Cooley (1902) built upon James' "discriminated aspects" of the "I" and the "me," highlighting the social self (our "looking glass" self), which is our perceptions of what others think of us and how we're affected by those perceptions. Mead (1934) elaborated on this theme by stating that by taking on the role of the "generalized other," we appear as social objects; that is, we become aware of ourselves by the way people react to us as a social object. Broadening the theorists' view, Lewin (1936) asserted that the self-concept is represented by a life-span perspective--the individual's conceptions of one's personal experience of goals, evaluations, ideas, perceptions of significant objects, and future plans.

How we conceive ourselves in toto (i.e., the self or self-concept), then, is comprised of the perceptions of the multitude of self-conceptions pertinent to the situation and stage of the life cycle (Openshaw & Thomas, 1986). Self-conceptions do not exist in isolation but are continually influenced by significant others. Through the course of social interaction we become aware of these self-conceptions, evaluate their relative congruity, derive a personal image thereof, and evoke an affective response to the image subjectively created. Consequently, we

are continuously organizing the many self-conceptions into an individual, structural configuration (i.e., self-image) that helps us to understand ourselves in the variety of contexts within which we are interactants.

A Model of Self-Esteem

The Self and Self-Concept

Although the terms "self" and "self-concept" are widely used today, there certainly are no general agreements regarding the essential characteristics of its conceptualization; i.e., antecedents, development, or consequences. For the most part, however, social scientists agree that the self arises and is maintained through social interaction (Openshaw & Thomas, 1986). As an individual encounters others, a process of interaction between the self as actor (the "I") and the self as reactor (the "me") develops; that is, the relations between persons, or the interpersonal, are necessary for intrapersonal development. The intrapersonal development of the self-concept is based upon that which is known and evolves during the course of interpersonal relations. The "known" is commonly referred to in symbolic interaction literature (Blumer, 1969; Manis & Meltzer, 1978) as the social object or the "me."

As one reflects upon the interactive process underlying the development and maintenance of the self-concept, it becomes apparent that an important element of self-concept knowledge is that of the evaluation of the self-concept components (i.e., self-conceptions) that ultimately precede self-esteem. It is suggested (Openshaw & Thomas, 1986) that the self or self-concept is comprised of many self-conceptions that may covary across time according to one's placement within the context of the life cycle, relative importance of significant others, personal circumstances,

etc. For convenience, however, throughout this paper, reference to this multitude of self-conceptions is made with the generic term "self-conception." Thus, the reader is advised that when the author refers to self-conception, two ideas must be kept in mind: either that one self-conception may indeed be being referred to or that the term implies many self-conceptions.

Extant research (e.g., Openshaw & Thomas, 1986) suggests that self-conceptions are real or ideal in nature. Real self-conceptions refer to those self-conceptions that are based in perceived reality at any given point in time, whereas ideal self-conceptions are those conceptions of the self an individual accepts for himself or herself as a standard he or she desires. These self-conceptions may be noted in many areas such as personal attributes, social identities, life circumstances, etc.

Self-Conception Disparity

Respect, successes, interpretation of experiences, and response to devaluation within a social context mediate the variety of self-conceptions incorporated to form the self-concept at any given time during the life cycle (Coopersmith, 1981). As such, it is logical to conclude that the self-conceptions may be continually undergoing an evaluative process comparing one's ideal position with that of their current reality. This comparative process results in a continuous outcome ranging along two dichotomous dimensions focusing on disparity. The first suggests that the real self-conception and the ideal self-conception are essentially congruent, thus resulting in little or no disparity. The second indicates that disparity is noted because the real and ideal self-conceptions are incongruent.

Self-Image

As a consequence of the evaluation of the real self-conception with the ideal self-conception, an individual becomes aware of his or her immediate life status. It is suggested that the self-image is like a vision of one's degree of potential that becomes incorporated into daily behavior. As such, the self-image becomes the underlying source of psychological motivation due to its unique relationship to self-esteem.

Self-Esteem

During the course of interaction, meanings relative to the comparison of our real self-conception with our ideal self-conception evolve and become associated with the self-images derived (see Leahy, 1985 and Werner, 1948). These meanings are subjective in nature and affectively laden. The affect associated with the meaning of the self-image is referred to as self-esteem. Thus, self-esteem is the affective response that is associated with the self-image derived from the evaluative comparison of the real vs. ideal self-conception.

Self-Conception Disparity: Two Theoretical Positions

At least two theoretical positions have addressed the issue of self-conception disparity. An examination of these two theories suggests that while methodologically similar, the theoretical postures on the relationship between self-conception disparity and self-esteem appear to be diametrically opposed. The first theoretical position, posited by Rogers and Dymond (1954), suggests that disparity can be correlated with the degree of exhibited psychopathology in an individual. Within this frame of reference, it is indicated that the larger the perceived

disparity between the real and the ideal self-conception, the lower the self-esteem and, consequentially, the greater the likelihood that dysfunction, abnormality, and/or psychopathology will be noted (e.g., Rogers, 1951). Alternately, the antithesis of these theorists states that psychoemotionally healthy individuals are those who perceive that their real self-conception is very close to what their ideal self-conception could be (see also Butler & Haigh, 1954). Thus, the smaller the self-conception disparity, the more positive the self-esteem and the greater the likelihood of emotional well being.

The second frame of reference comes initially from the work of Achenbach and Zigler (1963; see also Katz & Zigler, 1967, or Zigler, Balla, & Watson, 1972), who posit a cognitive-developmental point of view when interpreting self-conception disparity data. These theorists contend that self-conception disparity is positively related to self-esteem and, therefore, emotional well being. It is suggested that a psychoemotionally healthy individual is one who demonstrates a large disparity between the real self-conception and that of the ideal self-conception. The rationale behind such thinking is that this disparity, rather than fostering a sense of hopelessness, actually acts as a form of motivation in encouraging an individual to stretch forth to meet one's potential.

The above-described relationship is mediated by such variables as an individual's (a) cognitive capacity to clearly differentiate rational and irrational standards, expectations, etc.; (b) ability to flexibly internalize, accommodate, and assimilate social norms; and (c) understanding of cognitive distortions that violate a sense of self-esteem (e.g., shame, guilt, embarrassment, etc.). These mediating influences are directly related to age (Katz & Zigler, 1967), intelligence

(Zigler et al., 1972), as well as with social competence (Achenbach & Zigler, 1963). Additional existing research points to the importance of experiential or social learning factors such as life histories (Zigler et al., 1972), the ability to take on roles (Leahy & Huard, 1976), and a desire to emit socially valued behaviors (Katz, Zigler, & Zalk, 1975) in the process of reconciling self-conception disparity towards a positive self-esteem. Finally, it must be noted that outcome is also dependent upon the effects of such interaction variables as socioeconomic status, ethnicity, and gender (Phillips & Zigler, 1980).

In conclusion, extant research suggests that self-esteem is related to the degree of self-conception disparity derived from the evaluation that takes place between the real self-conception and the ideal self-conception. However, there are at least two differing theoretical positions regarding the relationship between self-conception disparity and psychoemotional outcome.

Statement of the Problem

Two diametrically opposed theoretical positions have been postulated and supported either empirically or clinically. The confusion is noted when one recognizes that while both use basically the same methodological procedures to derive the measure of self-conception disparity, the relationship of the calculated measure of self-conception disparity to self-esteem is radically different. While such a discrepancy appears to exist between two arguments that seem to be both theoretically as well as either clinically or empirically valid, one must wonder if the two positions have ever been integrated. A purview of self-esteem literature leads one to believe that, indeed, the two positions have been (at least

theoretically) integrated, though no evidence exists as to empirical or clinical validation. This notion is based on the work of James (1890), wherein he conceptualizes self-esteem as the quotient of one's successes to his or her pretensions. A close examination of the ratio set forth by James would lead one to the impression that both interpretations previously presented regarding self-conception disparity and self-esteem can be uniquely represented through the implementation of a ratio method, as opposed to a subtraction-absolute value method, in calculating self-conception disparity. It is suggested that the Ratio Method permits those with large self-conception disparity but without sufficient cognitive development to reconcile the differences to fall at one extreme (i.e., self-derogation and psychoemotional pathology) and those with an adequate level of cognitive development to fall at the other (i.e., positive self-esteem and psychoemotional well being). While this is beyond the scope of the present research, it is the intent of this research to begin such a process by (a) empirically operationalizing the James ratio and (b) validating whether or not the Ratio Method allows for a more accurate method of calculating self-conception disparity.

Definition of Terms

The author suggests that the reader refer to Figure 1 to aid in the understanding of the following terms.

Self or Self-Concept

The basic feelings and knowledge that an individual has about who he or she is, subdivided into two basic divisions of the "I" and the "me." The former denotes the individual as an actor (subject) and the latter as

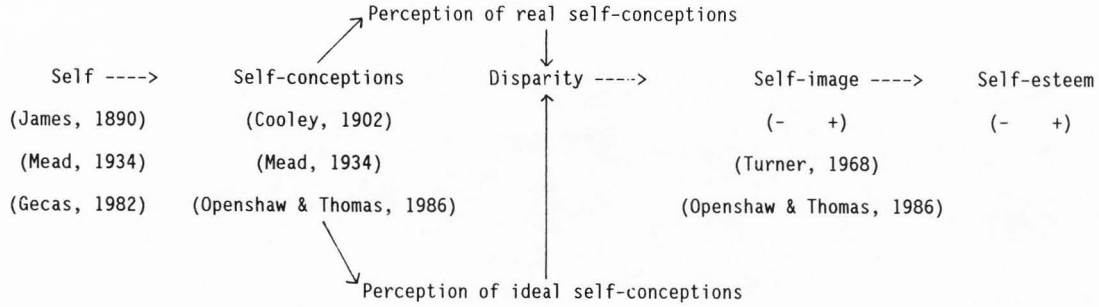


Figure 1. A model of self-esteem.

a social person (object), with the "me" or social object of the self also referred to as the self-concept, which, in turn, is subdivided into self-conceptions (Openshaw & Thomas, 1986).

Self-Conceptions

Perceptions an individual has about himself or herself in terms of who he or she is that may refer to either personal attributes and/or social identities. Personal attributes refer to those physical (tall, short), intellectual (intelligent, dumb), emotional (happy, sad), social (outgoing, reserved), and spiritual (values, beliefs) characteristics that constitute the individual. Social identities include ascribed (adolescent, American) and achieved (leader, scholar) statuses adopted by the individual (Openshaw & Thomas, 1986).

Positive or Real Self-Conception

The individual's perception of what she or he "really" is, his or her "committed" self-conception (Rosenberg, 1979; Turner, 1968). An example would be: "I am an attractive person."

Negative-Real Self-Conception

The individual's perception of a negative self-conception that she or he "really" is. For example, "I am an unattractive person."

Ideal Self-Conception

The individual's perception of a self-conception that is likely to be attained, touched by experience (Turner, 1968). "I wish I were more attractive than I am" is an example of an ideal self-conception.

Self-Conception Disparity

The continual evaluative process between the real and the ideal self-conception results in a measure of congruence between the two referred to as disparity. The greater the congruence, the less the disparity, and vice versa.

Self-Image

As a consequence of the evaluation of the real self-conception with the ideal self-conception, an individual becomes aware of his or her immediate life status. It is suggested that the self-image is like a vision of one's degree of potential that becomes incorporated into daily behavior. As such, the self-image becomes the underlying source of psychological motivation due to its unique relationship to self-esteem.

Self-Esteem

An individual's feeling of relative approval or disapproval regarding specific personal attributes, capacities, or identities. Self-esteem evolves through the internal evaluative process in which the individual compares the real with the ideal; i.e., self-esteem is the individual's amount of value, or esteem, placed on the self-image. Self-esteem is a multidimensional, rather than a unidimensional, construct. Two dimensions of self-esteem studied recently are self-esteem worth and power (Openshaw, 1978; Openshaw & Thomas, 1986; Openshaw, Thomas, & Rollins, 1981; Openshaw, Thomas, & Rollins, 1983).

REVIEW OF LITERATURE

Self-Conception Disparity and its Relationship to Self-Esteem

Gecas (1982) refers to the multidimensionality of the self-concept, elucidating the notion of self-conceptions. He notes the relationship between the evaluative process an individual implements (cognitively and, for the most part, imperceptibly) that results in an affective response referred to as self-esteem. These feelings of self-esteem range from self-derogation at one extreme to that of positive self-esteem at the other (Openshaw et al., 1981). It is the contention of this author that this affectively laden response is closely tied to the immediate image (self-image) evoked as a consequence of the evaluation of the real vs. the ideal self-conception (refer to Figure 1) (Turner, 1968).

Conceptualizing Self-Conception Disparity: An Issue of Methodology

Extant theory of self-conception disparity has increasingly lent itself to empirical validation. In the area of self-conception disparity, two methods have been employed to examine the relationship between self-conception disparity and self-esteem. While the data were collected in different ways, the method of deriving the measure of self-conception disparity basically remained the same; that is, both use a subtraction-absolute value method. This method involves taking the absolute value of the remainder when the ideal self-conception response is subtracted from the real self-conception response.

Rogers and Dymond (1954) advanced the first interpretation of self-conception disparity. The method employed to derive their measure of self-conception disparity is principally based on clinical observation and has only limited empirical validation. Research that has been conducted uses a Q-sort technique, then derives the measure through a subtraction-absolute value procedure. Based on their data, they conclude that a large self-conception disparity is a general indicator of maladjustment, mental illness, or psychopathology. These data are supported by other research that indicates that self-conception disparity is correlated with mental illness (Block & Thomas, 1955; Hillson & Worchel, 1957; Scott, 1958).

In 1963 Achenbach and Zigler challenged the Rogers and Dymond thesis, proposing an alternate interpretation based on a cognitive-developmental framework. This second interpretation states that self-conception disparity is a necessary condition of positive social competence and adjustment; in fact, they indicate that the greater the self-conception disparity the better the overall psychoemotional well being. The specific method of deriving self-conception disparity was to gather the data with a Likert scale instrument and then calculate the amount of self-conception disparity through the Subtraction-Absolute Value Method.

With such diverse interpretations of self-conception disparity, the question that is raised is whether or not the two positions have ever been integrated, conceptually or empirically. A review of self-esteem literature leads one to believe that, indeed, the two positions have been (at least theoretically) integrated, though no evidence exists as to empirical or clinical validation. This notion is based on the work of James (1890), wherein he conceptualizes self-esteem as:

$$\text{Self-esteem} = \frac{\text{Success}}{\text{Pretensions}}$$

This formula is interpreted to be the ratio of one's actual accomplishments to one's supposed potentialities. Others (Allport, 1968; Openshaw & Thomas, 1986; Rosenberg, 1979; Turner, 1968) have expressed the same fundamental conviction, conceptualizing self-esteem as a consistent effort derived from an evaluation of the real self-conception vs. the ideal self-conception.

Elaborating upon his formula, James (1890) proposed that the quotient of the ratio fraction (Success by Pretensions) can be increased by (1) decreasing (diminishing) the denominator (the ideal self-conception) and by (2) increasing the numerator (the real self-conception); that is, as accomplishments are achieved over time, goals are put into perspective and, therefore, into the individual's reality. Self-esteem, according to James, then, becomes more positive as the reality factor becomes more positive than the ideal factor.

It is with this mode of thinking that Rogers and Dymond (1954) have aligned themselves, describing the healthy individual as one with the smaller disparity, one with a more positive self-conception in relation to a less positive ideal self-conception. As an individual perceives who one is and that he or she should not be more than he or she is (little or no disparity), the individual has accepted himself or herself (ego-syntonic), is in agreement with himself or herself and, therefore, according to Rogers, is healthy. For example, "I am and I should not be more." Conversely, the greater the disparity the more negative the real self-conceptions and the more positive the ideal self-conceptions. It is this dissonance, according to Rogers, that covaries with pathology (ego-

dystonic); that is, it is proposed that there is dissonance when the real is negative, "I am not," and the ideal is positive, "I should be more."

Viewing the cognitive-developmental research of Zigler and associates through James' formula, perceptions of the ideal are measured as they appear to the individual in relation to his or her perceptions of the real; that is, as the real self-conceptions increase, the corresponding ideal self-conceptions increase. This implies that agreement with a real self-conception statement ("I am") and agreement with a corresponding ideal self-conception statement ("I should be more") denotes greater differentiations in cognitions, resulting in disharmony (ego-dystonic). This dissonance, according to Zigler et al. (1972), is the result of the more highly developed person utilizing more categories and finer distinctions within each category, increasing "the probability of a greater disparity between any two complex judgments" (p. 82). It would follow, then, that an individual who disagrees with the real ("I am not") while agreeing with the ideal ("I should be more") would result with a small disparity (ego-dystonic), with the smallest disparity individual being one who disagrees with the real and disagrees with the ideal (ego-syntonic), "I am not and I should not be more."

When comparing these two alternate methods of evaluation, it becomes apparent that the Rogerian view reveals disparity (and dysfunction) when there is more disagreement with the real self-conception; for example, "I disagree that I am happy," or "I am not happy." On the other hand, those in agreement with Zigler find that the more the individual agrees with the real ("I am") and the ideal ("I should be more"), the larger the disparity and the greater the adjustment, maturity, etc. Disparity, for the cognitive developmentalists, therefore, opposes the Rogerian paradigm as

it seems to expand depending on the harmonious relationship of the ideal to the real; that is, disparity is contingent upon an agreement with the real self-conception (for example, "I agree that I am happy"), rather than contingent upon a disagreement with the real ("I disagree that I am happy"). One needs to be happy, for example, before he or she can be happier. For both, there is disparity only when the individual agrees that he or she should be more than he or she is.

The Subtraction-Absolute Value Method Versus the Ratio Method

Prior analytic methodology has been by way of three modes of calculating self-conception disparity. First, a disparity score was calculated by counting the number of times a response to the real statement was different from the response to the corresponding ideal statement (Achenbach & Zigler, 1963; Leahy & Huard, 1976). For example, if an individual stated agreement to the real statement "I am happy" and then disagreement to the ideal statement "I should be happier," a difference was counted. The second calculation computed the absolute value of the difference between the real and ideal scores (e.g., de Man, 1982; Katz & Zigler, 1967; Leahy & Huard, 1976; Phillips & Zigler, 1980; Zigler et al., 1972); that is, the ideal score was subtracted from the real score and the remainder was reported as an absolute value. Thirdly, a measure of congruence was calculated by correlating the real response with the ideal response (Butler & Haigh, 1954; Jorgensen & Howell, 1969).

The method most commonly used is the Absolute Value Subtraction Method (hereafter known as the Subtraction-Absolute Value Formula or Method) which breaks the restrictions and qualifications of numerical

signs. This method is utilized frequently because it is not the direction that is important but the amount of disparity (Wylie, 1974, quoting Hillson & Worchel, 1957); that is, a positive discrepancy has the same implications as a negative discrepancy. Utilizing Hillson and Worchel's (1957) Self-Activity Inventory or Leary's (1957) ICL, a real self-conception minus ideal self-conception disparity score is obtained on each of the numerous trait scales and then summed across to generate a total real-ideal discrepancy score (Wylie, 1974).

Based upon the work of James (1890) wherein he conceptualizes self-esteem as the quotient of one's successes to his or her pretensions, it is suggested that a similar calculation of real self-conceptions divided by ideal self-conceptions be empirically operationalized.

It is the intent of this study, therefore, to (a) empirically operationalize the James ratio and (b) validate whether or not the Ratio Method allows for a more accurate method of calculating self-conception disparity.

METHOD

Sample

Data for this study were obtained from an extant data set collected in 1988 by Dr. D. Kim Openshaw, Utah State University. University Institutional Review Board clearance was obtained prior to the data collection. Participants in this study were drawn from a population of both males and females, ages 10 through 18, from schools in the Cache, Logan, and Granite, Utah School Districts and the Preston, Idaho, School District. Unmarried or never-been-married University students, ages 18 through 22, also both male and female, also participated on a voluntary basis through a random selection of Utah State University general education classes.

Self-Report Procedures

Positive-real self-conception statements, negative-real self-conception statements, and ideal self-conception statements were randomly ordered into an eye-easy, green-colored booklet, 8-1/2" by 5-1/2", identified as the Student Questionnaire (Appendix A). Participants responded to a five-point Likert-type scale: 1=Strongly Agree, 2=Agree, 3=Undecided, 4=Disagree, and 5=Strongly Disagree. An identification number was assigned after the student had completed the questionnaire. An outside white cover sheet was attached entitled "Questionnaire for Parents/Guardians of Participating Students," that was filled out by the parents or guardians of the participating student or by the student himself/herself if over age 18. Demographic variables were gathered on

this cover sheet, such as descriptive family indices (family size, marital status of parent[s], and socioeconomic status) and an index of school achievement (reported grade point average). Parents were requested to permit their adolescent to answer the inventory questions according to his or her own perception. In the school districts where permission from the superintendent (or responsible official) and from the principals of the respective junior high, middle, and high schools was obtained, a random sample of available classes was selected. The teachers of the designated classes were approached for permission to visit their class for 10-15 minutes on a mutually agreeable date. Teachers were asked to sign a letter of informed consent allowing their students to participate in the project, should the students choose to do so (Appendix B).

A brief visit was made to each selected class to present a short description of (a) the purpose of the project, (b) an individual's rights as a subject should one choose to participate, and (c) the risks and benefits of participation. Students were given a written informed consent statement giving a brief definition of self-esteem, the purpose of this study, and procedures. Additionally, students were informed that there was no right or wrong answer. The completed questionnaires were retrieved from the participating students the following day, separate from the signed consent forms collected at the same time. From these classes a total sample of 1,011 junior high, middle, high school, and/or University students was obtained.

Measures of Disparity

If it can be assumed that the self-concept is one of the principal dynamics in human behavior (what we "know" about ourselves moves us to

behave as we do), then an interstitial theory for analysis of the self-concept is perception (La Benne & Green, 1969). Experienced directly, perception allows the individual to choose what he or she will attend to, moderated by past experiences, present needs, and current self-conceptions. Wylie (1974) states that the self-ideal discrepancy is a phenomenal discrepancy in that the reality of phenomena lies solely in the way they are perceived by the individual. Both "points" (the real self and the ideal self), by definition, are in the phenomenal field of the individual and, thus, the discrepancy or disparity is experienced directly also (Wylie, 1974).

Despite the weaknesses involving a self-report response of perceptions (e.g., social bias or "perceptual defenses"), this method seems to be appropriate for this type of construct (see Wylie, 1974, for a review) and, in fact, may be considered the "only" way to reach the disparity phenomena. The additional suggestion made by Wylie (1974) that the individual report his or her perception of the disparity amount appears valid but beyond the scope of this investigation.

In harmony with previous research focusing on the disparity between the real self-conceptions and the ideal self-conceptions (for example, Katz & Zigler, 1967 and Phillips & Zigler, 1980), this study utilized a specifically devised idiosyncratic questionnaire. The rationale for choosing item content within eight areas were considered to be construct-salient for the adolescent. These eight areas were grouped into subscales in the following manner: mood, 4 items; self-confidence, 4 items; self-control, 2 items; security, 3 items; personal, 2 items; peers, 4 items; parents, 3 items; and life philosophy, 1 item; for a total of 23 items. Subjects were asked to respond to the following concepts in each of the

above-stated eight areas: (a) Me as I really am (positive-real); (b) Me as I really am not (negative-real); and (c) Me as I should be (ideal). Each of these 23 items was randomized throughout the questionnaire.

Additional Instruments

Items from six separate construct-related measures were additionally randomized throughout the self-report questionnaire. They were: (1) the Rosenberg Self-Esteem Scale, with a coefficient of reproducibility (Rep.) of .92 reported by Rosenberg (1965), used in its entirety; (2) a measure of 23 self-esteem items specifically devised for this study, hereafter referred to as the Openshaw Self-Esteem Scale; (3) the Osgood Self-Esteem Semantic Differential, with a two-factor Cronbach's Alpha of .72 for social competence and .74 for social worth (Openshaw, 1978; Openshaw et al., 1981); (4) a suicide ideation scale based on Devries' (1966) self-report inventory, 6 items used; (5) the Beck Depression Inventory, reporting internal consistency reliability for the scales of .86 (Beck, Rush, Shaw, & Emery, 1979), all 20 items utilized; and (6) the Revised UCLA Loneliness Scale, with a high internal consistency (coefficient Alpha=.94) reported by the authors (Russell, 1982), all 20 items included.

Analysis

Analysis of the data was carried out through utilization of the Statistical Package for Social Sciences (SPSS-X User's Guide, 1988). Three separate formulas were used to operationalize self-conception disparity. Hereafter, these are referred to as (1) the Subtraction-Absolute Value Formula, (2) the Positive-Real Ratio Formula, and (3) the Negative-Real Ratio Formula. Each of these three formulas was computed for the total items as well as for each of the eight subscales. For each

subscale the formula was applied to each item within that subscale; the results were then summed.

The Subtraction-Absolute Value Formula was computed by taking the absolute value of the remainder when the ideal item score was subtracted from the positive-real item score. These scores were then summed to create a subtraction-absolute value total score or subscale score. The Positive-Real Ratio Formula was computed by dividing the positive-real item score by the ideal item score; the results were then summed. The Negative-Real Ratio Formula was computed by dividing the negative-real item score by the ideal item score, with these results also summed to create a total or subscale score. Prior to the division of the negative-real items, coding was reversed so that the positive-real items and the negative-real items were weighted the same.

Reliability was tested by Cronbach's Alpha for each of the three components making up the separate disparity formulas (positive-real, negative-real, and ideal items), as well as for the three computed formulas across each of the eight subscales. Additionally, reliability estimates (Cronbach's Alpha) were calculated for the six construct-related scales: the Rosenberg Self-Esteem Scale, the Openshaw Self-Esteem Scale, the Osgood Semantic Differential Self-Esteem Scale, the Suicide Ideation Scale, the Beck Depression Inventory, and the UCLA Loneliness Scale. In order to enhance the reliability estimates of the Rosenberg Self-Esteem Scale, the Suicide Ideation Scale, and the Beck Depression Inventory, items that were lowering the reliability were dropped, and reliability estimates were computed a second time. Specifically, questions 1 and 10 were dropped from the Rosenberg Self-

Esteem Scale, questions 21 and 75 were dropped from the Suicide Ideation Scale, and question 11 was dropped from the Beck Depression Inventory.

Pearson correlations were computed to analyze three important factors relative to the external constructs as well as the two formulas utilized in the study. The first correlations, described in the Results section, were computed to assess the degree of convergence and discrimination across the six construct-related scales (i.e., Rosenberg Self-Esteem Scale, the Osgood Semantic Differential, Openshaw Self-Esteem Scale, UCLA Loneliness, Suicide Ideation Scale, and the Beck Depression Inventory). The second examines the relationship between the positive-real and the negative-real disparity items which were the basic items upon which the formulas were derived. Finally, correlations were derived to assess the degree of association between the Subtraction-Absolute Value Formula and the Ratio Formula. This was accomplished such that correlations were obtained for not only the total scores, but for each of the eight subscales as well (i.e., mood, self-confidence, self-control, security, personal, parents, peers, and philosophy).

Based on the conclusions drawn from the tests of correlation between the two formulas (they are not measuring the same phenomena), a forced-entry multiple regression was performed across the eight subscales on the six construct-related instruments. Meeting the assumption of normality, an arc sin transformation was not performed.

RESULTS

Two methods of conceptualizing self-conception disparity were empirically operationalized. The first, a subtraction-absolute value formula, was computed by taking the absolute value of the remainder of the ideal item subtracted from the positive-real item. The second method, a ratio formula, derived a proportion by using the real item as the numerator (i.e., positive-real or negative-real item) and the ideal item as the dividend. Prior to the division of the negative-real item by the ideal item, coding was reversed for the negative-real items so there would be equal weight for the positive-real items and the negative-real items. The purpose for using both the positive-real and the negative-real calculations is that it was suspected that these are the same measures and, as such, should be significantly correlated. Thus, this became an internal validity check.

Reliability

Positive-Real, Negative-Real, and Ideal Items' Reliability Estimates

Reliability estimates for the three components of the comparison formulas were computed for internal consistency using subject responses. Table 1 summarizes the internal consistency based on Cronbach's Alphas, with estimates showing strong support for the reliability of the items comprising each of the three formula components.

Table 1

Reliability Estimates (Alpha) for the Three Components of the Comparison Formulas

Components	Alpha	Number of items used
Positive-real items	.8667	23
Negative-real items	.8775	23
Ideal items	.9103	23

Subscale Reliability Estimates

Table 2 summarizes the reliability coefficients computed for internal consistency of the independent variables. These variables consist of the eight subscales against which the two methods used in this study to derive self-conception disparity were compared and contrasted. In that the eighth subscale, philosophy, was comprised of only one item, it was not included in the reliability computations. The data indicate that across the comparison of the Subtraction-Absolute Value versus the Positive-Real Ratio Method, six of the seven reliability estimates were greater for the Ratio Method. Examining the peer subscale, it is noted that the difference between the reliabilities is minimal.

In comparing the Subtraction-Absolute Value to the Negative-Real Ratio Method across the seven subscales, it was determined that all seven of the reliability estimates for the Ratio Method were greater.

Table 2

Reliability Estimates (Alpha) for the Eight Subscales

Independent variable	Subtraction-Absolute Value	Positive-Real Ratio	Negative-Real Ratio	Number of items
Mood	.4006	.6796	.6929	4
Self-confidence	.5938	.6060	.6117	4
Self-control	.3756	.4310	.4290	2
Security	.5198	.5276	.6111	3
Personal	.4448	.4480	.4708	2
Peer	.5388	.5264	.6275	4
Parents	.6294	.7377	.6998	3
Philosophy		(Only one item in scale)		1
TOTAL ITEMS				23

Construct-Related Scales' Reliability Estimates

Reliability estimates for six instruments purporting to measure related constructs (the Rosenberg Self-Esteem Scale, the Osgood Semantic Differential [OSD] Self-Esteem Scale, the Openshaw Self-Esteem Scale, the Suicide Ideation Scale, the UCLA Loneliness Scale, and the Beck Depression Inventory) were computed for internal consistency.

To enhance the reliability of the scales, items that (in the first analysis) were not contributing to the reliability estimate were dropped. A second reliability analysis was calculated on three of the six scales for which items were deleted, that resulted in an increase in the reliability estimates for various scales. Results are summarized in Table 3.

Table 3

Reliability Estimates (Alpha) for Construct-Related Scales

Dependent variables	Alpha	Number of items included	Number of items deleted
Openshaw	.8342	23	0
Rosenberg	.8139	8	2
Osgood	.8212	33	0
UCLA	.8228	20	0
Suicide	.7711	4	2
Beck Depression	.8473	19	1

Validity

Face Validity

To address the issue as to whether or not the items for the various scales used in the study appear to measure what is purported, independent reviewers were selected to examine and rate the items. Items rated as being most closely associated with the identified construct were retained in the instrument.

Construct Validity

Table 4 summarizes the zero-order correlations used to examine convergence and discrimination across the six instruments identified as construct-related. As noted from the data, all of the instruments except the UCLA Loneliness Scale with the Osgood Semantic Differential, the Suicide Ideation Scale, and the Beck Depression Scale were strongly correlated. These data suggest that the remainder of the scales are sufficiently correlated to conclude that they measure similar phenomena.

A summarization of the correlations between the subtraction-absolute value totals and the two ratio totals is found in Table 5. It should be noted, when examining the table and the frequency of significant correlations, that the sample in the study consisted of 1,011 subjects. With this large of a sample, significant correlations are expected even though the correlations are small (e.g., $r=-.07$, $p<.01$). Thus, it was decided that for the purpose of this study, significant correlations would be viewed as .4 or greater. This is done to reduce the likelihood that the significance obtained is an artifact of the sample size or a Type One error: a true null hypothesis is rejected and a significant difference is reported.

Table 4

Zero-Order Correlations Between the Six Construct-Related Variables

	Rosenberg	Osgood	UCLA Loneliness	Suicide Ideation	Beck Depression
Openshaw	.5686	.6775	.3638	.5723	.6147
Rosenberg		.3861	.4252	.4438	.4101
Osgood			.2517	.4006	.4297
UCLA Loneliness				.2062	.2205
Suicide Ideation					.7847

$p<.000$.

Table 5

Zero-Order Correlations Between the Subtraction-Absolute Value Formula Totals and the Positive-Real Ratio Formula Totals

	Positive-real ratio								
	Mood	Self-confidence	Security	Self-control	Personal	Peer	Parents	Philosophy	All 23 items
Mood	.0882**								
Self-confidence		-.2472***							
Security			-.1047***						
Self-control				-.3373***					
Personal					-.0690*				
Peer						-.3216***			
Parents							-.0737**		
Philosophy								-.4945***	
All 23 items									-.3425***

*$p<.05$.

**$p<.01$.

***$p<.001$.

An examination of the correlation between the Positive-Real Ratio and Subtraction-Absolute Value Formulas using the total items comprising the subscales suggests that the two methods are correlated; however, the amount of common variance is only 12%. With this amount of variance and the previous assumption regarding significance and sample size, it must be concluded that the two methods are not measuring the same phenomena (see Table 5).

When items are grouped according to subscale, the correlation between the Positive-Real Ratio and Subtraction-Absolute Value Formulas confirms the above conclusion from the total items' correlation (refer to Table 5).

An examination of the correlation between the Negative-Real Ratio and Subtraction-Absolute Value Formulas using the total items comprising the subscales suggests that the two methods are correlated; however, the amount of common variance is only 13%. With this amount of variance and the previous assumption regarding significance and sample size, it must be concluded again that the two methods are not measuring the same phenomena (see Table 6).

When items are grouped according to subscale, the correlation between the Positive-Real Ratio and Subtraction-Absolute Value Formulas confirms the conclusion from the total items' correlation (refer to Table 6).

Inasmuch as there are negative correlations noted in Tables 5 and 6, it is important to clarify the nature of the correlations. This clarification seems critical in that, from the initial inspection, one would assume that the negative correlations, obtained when examining the relationship between the Subtraction-Absolute Value and the Ratio Formula, suggest that the two measures are simply inverse-related. This

Table 6

Zero-Order Correlations Between the Subtraction-Absolute Value Formula Totals and the Negative-Real Ratio Formula Totals

	Negative-real ratio								
	Mood	Self-confidence	Security	Self-control	Personal	Peer	Parents	Philosophy	All 23 items
Mood	.0079								
Self-confidence		-.2589***							
Security			-.2262***						
Self-control				-.3978***					
Personal					-.1253***				
Peer						-.3002***			
Parents							-.1214***		
Philosophy								.3838***	
All 23 items									-.3579***

*$p<.05$.

**$p<.01$.

***$p<.001$.

relationship is based on several factors, however, and is therefore more complex. Three possible explanations follow.

The first explanation is based on the calculation of the self-conception disparity scores for the two formulas. Subjects responded to the statements by circling a 1, meaning that they strongly agreed, 2 if they agreed, 3 if they were undecided, 4 if they disagreed, and 5 if they strongly disagreed. In so doing, if a respondent circled a 4 (disagreement) for a real statement and a 1 (strongly agreed) for an ideal statement, their score, if computed by the Subtraction-Absolute Value Formula (4-1), would be 3. If the disparity score was calculated using the Ratio Formula (4/1), the score would be 4. On the other hand, if the respondent strongly agreed with the real statement (1) and disagreed with the ideal statement (4), the value derived from the Subtraction-Absolute Value Formula (1-4) would be 3; whereas the disparity score calculated by the Ratio Formula (1/4) would be .25. This procedure is continued for each of the possible variations and presented for the reader's interest in Appendix C. The range of possibilities for the various combinations using the Subtraction-Absolute Value and the Ratio Method are then plotted and appear in Figure 2. An examination of this figure makes it clear that when there is agreement with the ideal (e.g., "I am and I should be more"), there is a positive correlation between the Subtraction-Absolute Value and the Ratio Formula. However, when there is a disagreement with the ideal (e.g., "I am and I should not be more"), the correlation is negative. Thus, in that the correlation in our data is negative, this indicates that the latter is the case in this data set.

The second explanation for the negative correlation is then examined using the frequency data on the responses obtained from the subjects. In

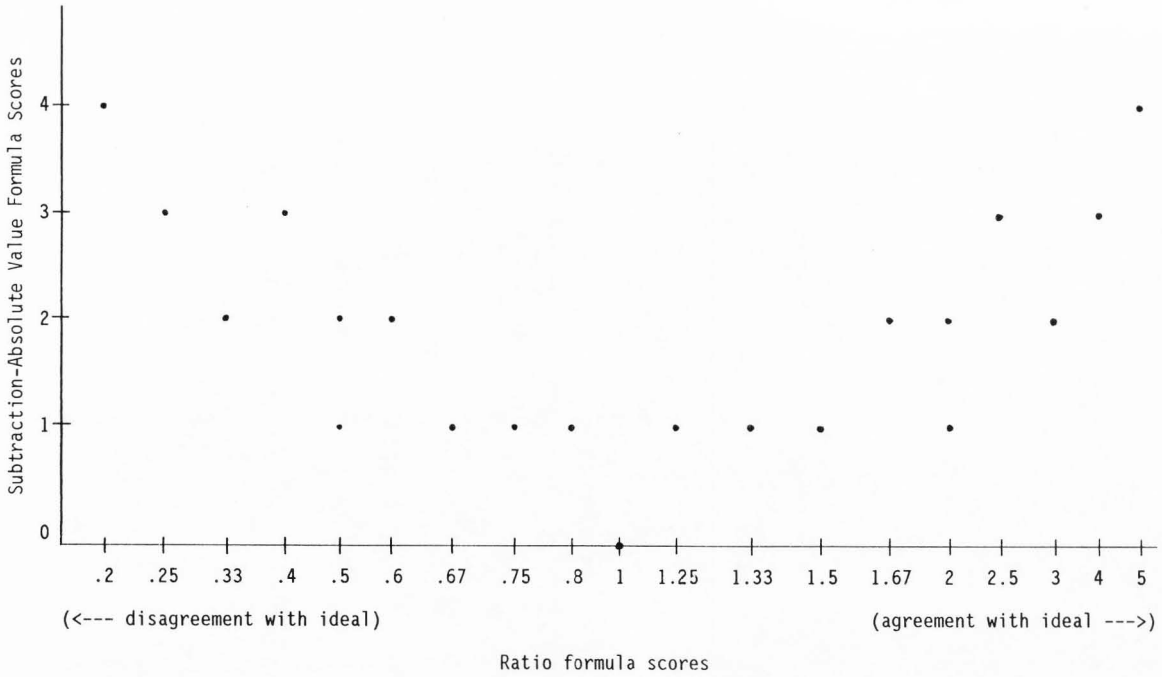


Figure 2. The convergence of scores when computed by the Subtraction-Absolute Value Formula and by the Ratio Formula.

Appendix D, the frequency data for the Ratio Formula scores showing the highest and lowest cumulative percent for disagreeing with the ideal statement is depicted. Across the 23 items, in all but one case (a mood subscale statement), a greater proportion of subjects responded by disagreeing with the ideal statement.

The final explanation is more theoretical than empirical. It is suggested that because this is a sample of "normal" adolescents, the results may be more likely explained from a cognitive developmental perspective than a psychopathological one. In that the subjects were combined in the analysis, the analysis did not permit for the discrimination necessary to ferret out the differences in cognitive development. By this it is meant that most of the sample would be in the initial phases of formal operations and, therefore, would possibly not be sufficiently advanced so as to permit the necessary abstraction for creating an ideal self-conception against which to compare their real self-conception. To them, then, the ideal and the real may be virtually one in the same. Further research is necesssary to examine this interesting finding.

In sum, the negative direction of the correlation between the two formulas indicates that more subjects in this study disagreed, rather than agreed, with the ideal statement.

Analysis of the relationship between the Positive-Real and the Negative-Real Ratio item as a test of congruence suggests that the two are significantly correlated (r=.9293) and, therefore, the conclusion can be drawn that they are measuring the same phenomena.

Criterion-Related Validity -
Concurrent Validity

Inasmuch as the data from the construct validity analysis suggest that the two methods are not related, a question arises relative to the association of these two methods to external variables theoretically linked to hypotheses associated with self-conception disparity (Achenbach & Zigler, 1963; Rogers & Dymond, 1954).

Information presented in Tables 7-12 suggests that the results obtained from regressing the eight subscales on each of the construct-related variables are similar; that is, both the Positive-Real and the Negative-Real Ratio Formulas account for a greater proportion of the variance across these subscales than does the Subtraction-Absolute Value Formula. Although the construction of a ratio score often leads to deviations from the assumption of normality, this was not the case with these data. Therefore, the traditional arc sin transformation was not performed.

Content Validity

In that the data suggest that the two methods are measuring different phenomena relative to self-conception disparity with minimal common variance, the question which arises is which of the two methods, the Subtraction-Absolute Value or the Ratio Method, most closely approximates the assumed line of normality. The line of normality is the line that is based on the assumptions of normality relevant to the projected hypothetical goodness of fit (see Figures 2 through 7). Thus, it is possible to determine how far the residuals deviate from normalcy. The greater the deviation, the less the goodness of fit. The findings indicated that across all eight of the subscales, the Positive-Real and

Table 7

Regression of the Eight Selected Subscales on the Openshaw Self-Esteem Scale Based on Each of the Three Disparity Formulas

	Subtraction-Absolute Value		
	Beta	T	Significant T
Philosophy	-.261433	-8.453	.0000
Parents	-.139138	-4.253	.0000
Peers	-.116524	-3.492	.0005
Self-confidence	-.094381	-2.384	.0173
Self-control	-.077510	-2.324	.0203
Personal	-.073544	-2.352	.0188
Mood	.059632	1.785	.0745
Security	-.039400	-1.063	.2883

R square = .29936

	Positive-Real Ratio		
	Beta	T	Significant T
Mood	.274173	10.967	.0000
Self-confidence	.197917	7.291	.0000
Security	.150308	5.945	.0000
Parents	.137356	6.831	.0000
Peers	.126020	5.972	.0000
Philosophy	.103044	5.128	.0000
Self-control	.099894	4.438	.0000
Personal	.055301	2.592	.0097

R square = .69693

	Negative-Real Ratio		
	Beta	T	Significant T
Mood	.281013	9.573	.0000
Self-confidence	.225973	6.943	.0000
Parents	.186344	8.201	.0000
Philosophy	.117120	5.099	.0000
Peers	.080936	3.217	.0013
Personal	.076255	3.142	.0017
Security	.065946	2.180	.0295
Self-control	.013576	.534	.5933

R square = .61386

Table 8

Regression of the Eight Selected Subscales on the Rosenberg Self-Esteem Scale Based on Each of the Three Disparity Formulas

	Subtraction-Absolute Value		
	Beta	T	Significant T
Mood	.245925	4.814	.0000
Self-confidence	.150619	2.829	.0049
Philosophy	-.121563	-2.633	.0088
Personal	.091336	1.927	.0547
Peers	-.032937	- .682	.4956
Security	.025622	.508	.6115
Parents	-.019753	- .411	.6809
Self-control	-.013994	- .286	.7747

R square = .14595

	Positive-Real Ratio		
	Beta	T	Significant T
Mood	.230658	4.465	.0000
Self-confidence	.227584	4.260	.0000
Security	.085317	1.718	.0865
Philosophy	.070103	1.657	.0982
Personal	.069856	1.569	.1173
Self-control	.052994	1.131	.2585
Peers	.050503	1.139	.2554
Parents	.045934	1.102	.2711

R square = .33864

	Negative-Real Ratio		
	Beta	T	Significant T
Self-confidence	.259163	4.351	.0000
Mood	.246611	4.528	.0000
Personal	.105955	2.342	.0196
Parents	.093088	2.200	.0283
Philosophy	.068600	1.560	.1195
Peers	-.030610	- .635	.5255
Security	.029522	.561	.5754
Self-control	-.008722	- .186	.8527

R square = .32350

Table 9

Regression of the Eight Selected Subscales on the Osgood Semantic Differential (OSD) Self-Esteem Scale Based on Each of the Three Disparity Formulas

	Subtraction-Absolute Value		
	Beta	T	Significant T
Philosophy	-.153837	-4.529	.0000
Peers	-.121208	-3.308	.0010
Parents	-.093503	-2.603	.0094
Self-control	-.092875	-2.536	.0114
Self-confidence	-.090480	-2.081	.0376
Security	-.014964	- .367	.7133
Mood	.040130	1.094	.2742
Personal	.006874	.200	.8413

R square = .15508

	Positive-Real Ratio		
	Beta	T	Significant T
Self-confidence	.181214	4.686	.0000
Peers	.178370	5.933	.0000
Philosophy	.145357	5.078	.0000
Self-control	.124522	3.883	.0001
Mood	.096048	2.697	.0071
Security	.056207	1.561	.1190
Personal	.045622	1.501	.1338

	Positive-Real Ratio		
	Beta	T	Significant T
Parents	.035761	1.248	.2122

R square = .38488

	Negative-Real Ratio		
	Beta	T	Significant T
Self-confidence	.213605	4.942	.0000
Philosophy	.149873	4.914	.0000
Mood	.102113	2.619	.0089
Peers	.094178	2.819	.0049
Parents	.077681	2.574	.0102
Security	.049670	1.237	.2165
Personal	.042700	1.325	.1855
Self-control	.032997	.978	.3285

R square = .31898

Table 10

Regression of the Eight Selected Subscales on the Beck Depression Inventory Based on Each of the Three Disparity Formulas

	Subtraction-Absolute Value		
	Beta	T	Significant T
Philosophy	-.267078	-7.670	.0000
Mood	.115142	3.062	.0023
Parents	-.102015	-2.770	.0057
Security	-.058088	-1.391	.1644
Self-confidence	.042022	.943	.3460
Self-control	-.038597	-1.028	.3043
Peers	-.026091	- .694	.4876
Personal	-.003761	- .107	.9149

R square = .11185

	Positive-Real Ratio		
	Beta	T	Significant T
Philosophy	.225730	8.104	.0000
Mood	.219090	6.322	.0000
Parents	.161967	5.811	.0000
Peers	.094080	3.216	.0013
Personal	.071329	2.411	.0161
Self-confidence	.064348	1.710	.0876
Security	.063881	1.823	.0686
Self-control	.027118	.869	.3850

R square = .41769

	Negative-Real Ratio		
	Beta	T	Significant T
Mood	.238362	7.376	.0000
Peers	.202385	7.307	.0000
Parents	.173059	6.918	.0000
Philosophy	.149199	5.901	.0000
Self-confidence	.143309	4.000	.0001
Security	.060300	1.811	.0704
Personal	.046746	1.750	.0805
Self-control	-.023403	- .837	.4031

R square = .53204

Table 11

Regression of the Eight Selected Subscales on the Suicide Ideation Scale Based on Each of the Three Disparity Formulas

	Subtraction-Absolute Value		
	Beta	T	Significant T
Philosophy	-.246194	-6.975	.0000
Mood	.100883	2.647	.0083
Security	-.063800	-1.508	.1319
Self-confidence	.051952	1.150	.2504
Peers	.050712	-1.332	.1833
Self-control	-.044097	-1.159	.2469
Personal	-.035116	- .984	.3252
Parents	-.014171	- .380	.7043

R square = .08756

	Positive-Real Ratio		
	Beta	T	Significant T
Mood	.226833	6.163	.0000
Parents	.196641	6.643	.0000
Philosophy	.175971	5.949	.0000
Peers	.084673	2.726	.0065
Security	.084713	2.276	.0230
Self-confidence	.056019	1.402	.1613
Personal	-.008054	- .256	.7977
Self-control	.000000	.023	.9813

R square = .34323

	Negative-Real Ratio		
	Beta	T	Significant T
Mood	.251561	6.886	.0000
Parents	.208734	7.380	.0000
Peers	.141161	4.508	.0000
Philosophy	.101555	3.553	.0004
Self-confidence	.099692	2.461	.0140
Security	.052882	1.405	.1604
Personal	-.010939	- .362	.7173
Self-control	.005024	.159	.8738

R square = .40182

Table 12

Regression of the Eight Selected Subscales on the UCLA Loneliness Scale Based on Each of the Three Disparity Formulas

	Subtraction-Absolute Value		
	Beta	T	Significant T
Mood	.088184	2.240	.0253
Parents	-.079538	-2.063	.0394
Philosophy	-.064586	-1.772	.0767
Self-control	-.064466	-1.640	.1013
Peers	-.024516	- .623	.5331
Personal	-.015178	- .412	.6804
Self-confidence	-.013636	- .292	.7701
Security	-.001523	- .035	.9722

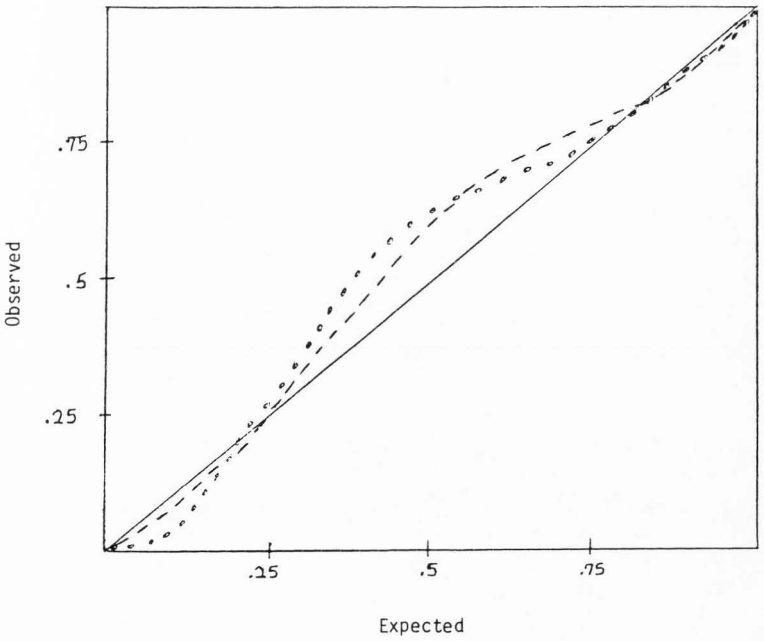
R square = .02708

	Positive-Real Ratio		
	Beta	T	Significant T
Peers	.227340	6.504	.0000
Mood	.139169	3.361	.0008
Self-confidence	.118277	2.630	.0087
Self-control	.096760	2.595	.0096
Personal	-.087157	-2.466	.0138
Philosophy	-.075635	-2.272	.0233
Parents	.028405	.853	.3940
Security	.015931	.380	.7037

R square = .16844

	Negative-Real Ratio		
	Beta	T	Significant T
Peers	.227188	6.132	.0000
Self-confidence	.171579	3.580	.0004
Mood	.129425	2.994	.0028
Personal	-.081140	-2.270	.0234
Philosophy	-.035048	-1.036	.3004
Self-control	.030221	.808	.4196
Parents	.030191	.902	.3672
Security	-.020229	- .454	.6498

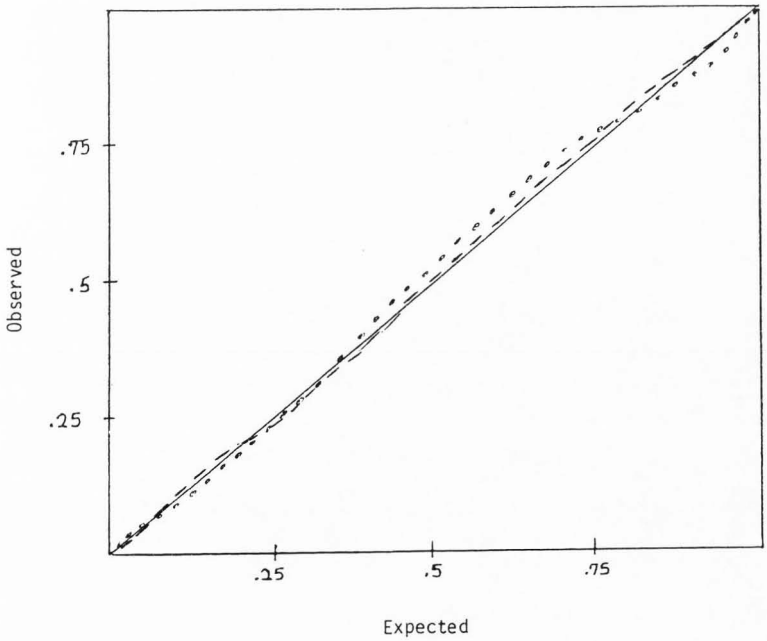
R square = .16256



Subtraction-Absolute Value Method . . . . .

Positive-Real Ratio Method - - - - -

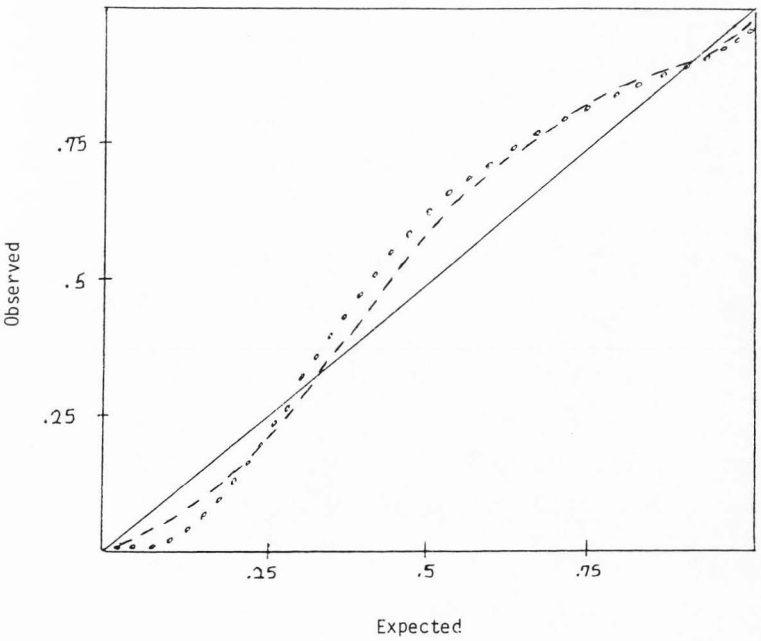
Figure 3. Normal probability plot comparison between the Subtraction-Absolute Value Method and the Positive-Real Ratio Method for the Rosenberg Self-Esteem Scale.



Subtraction-Absolute Value Method . . . . .

Positive-Real Ratio Method - - - - -

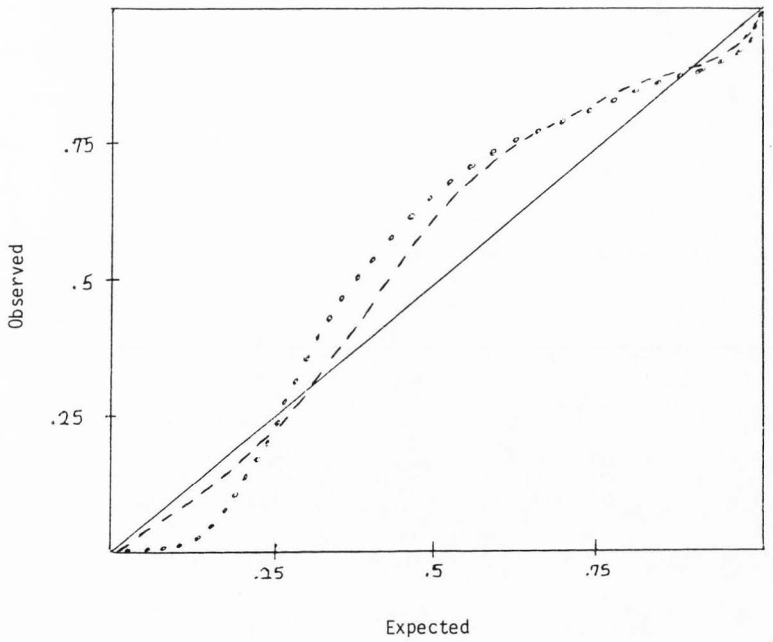
Figure 4. Normal probability plot comparison between the Subtraction-Absolute Value Method and the Positive-Real Ratio Method for the Osgood Semantic Differential Self-Esteem Scale.



Subtraction-Absolute Value Method . . . . .

Positive-Real Ratio Method - - - - -

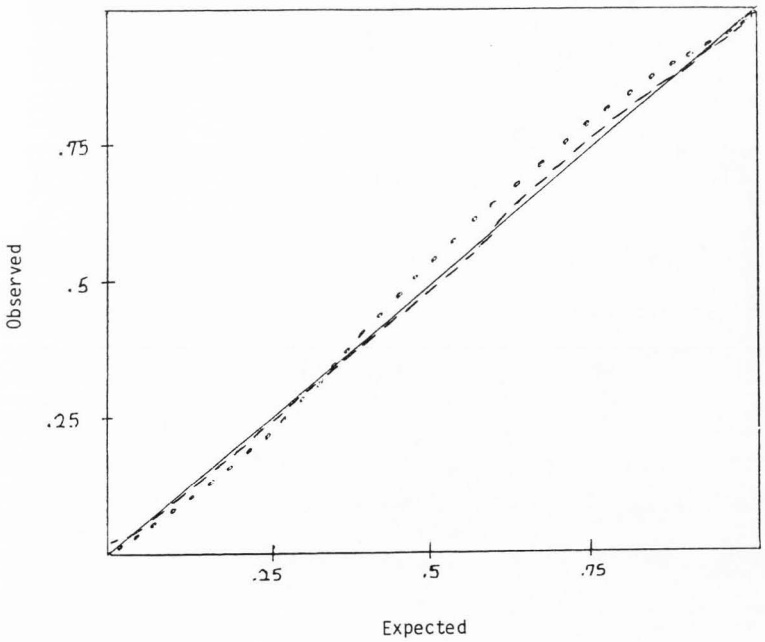
Figure 5. Normal probability plot comparison between the Subtraction-Absolute Value Method and the Positive-Real Ratio Method for the Beck Depression Inventory.



Subtraction-Absolute Value Method . . . . .

Positive-Real Ratio Method - - - - -

Figure 6. Normal probability plot comparison between the Subtraction-Absolute Value Method and the Positive-Real Ratio Method for the Suicide Ideation Scale.



Subtraction-Absolute Value Method . . . . .

Positive-Real Ratio Method - - - - -

Figure 7. Normal probability plot comparison between the Subtraction-Absolute Value Method and the Positive-Real Ratio Method for the UCLA Loneliness Scale.

the Negative-Real Formulas for deriving self-conception disparity more closely approximate the assumed line of normality than does the Subtraction-Absolute Value Formula. In other words, the residuals from the calculation of self-conception disparity using the Ratio Formula deviate less from the assumed line of normality than do to the residuals from the Subtraction-Absolute Value Method of calculating self-conception disparity.

It is suggested that this analysis supports the regression analysis previously reported.

DISCUSSION

Self-esteem has been an important heuristic concept since the beginning of recorded history (Openshaw, 1978; Openshaw & Thomas, 1986). There has been, however, considerable conceptual and methodological ambiguity surrounding the relationship between self-conception disparity and self-esteem (Openshaw, 1978), as exemplified in the work of Rogers and his associates, as well as Zigler and his associates. Rogers and Dymond (1954) suggested that the greater the amount of self-conception disparity, the more likely it is that the individual will experience negative self-esteem (e.g., self-derogation) and psychoemotional distress. This contention continues to be held as viable in the field of psychotherapy. Frequently one of the symptoms associated with a particular syndrome is that of low or negative self-esteem (e.g., DSM-III-R [American Psychiatric Association, 1987]). As such, one would conclude that when there is a large discrepancy between what one is and what one would ideally like to be, the image evoked is more likely to be interpreted irrationally (e.g, Beck et al., 1979; Burns, 1980; Ellis, 1958) and, consequently, result in negative self-esteem and psychoemotional distress.

Rogers' postulation regarding the relationship between self-conception disparity, self-esteem, and psychoemotional distress was brought into question with the work of Zigler and his associates (e.g., Achenbach & Zigler, 1963; Zigler et al., 1972) who, in applying a cognitive-developmental approach to self-conception disparity, find that the greater the self-conception disparity, the more likely it is that the individual will feel positive self-esteem and psychoemotional well being.

Their rationale is based on the fact that as an individual matures, the person has a greater capacity to ferret out cognitive discrepancies between who one is and who one wants to be. As such, as this discrepancy is resolved, there tends to be an internal motivation stimulated which encourages the individual to strive towards the "who I want to be" without derogating one's self.

A close review of the literature from these two competing theoretical frameworks would lead one to logically conclude that, in reality, both are correct. It is not difficult to imagine that an individual may perceive the disparity that arises between the self-conceptions from either the irrational perspective, which then leads to psychoemotional distress, or from a rational perspective, which facilitates optimal well being. Both are theoretically consistent and have ample empirical and clinical evidence for support.

A second issue of relevance to this research lies in the methodology upon which the calculation of self-conception disparity is formulated. It is interesting to note that while the data collection process was different, both Rogers and his associates as well as Zigler and his associates have essentially calculated self-conception disparity with the same formula, the Subtraction-Absolute Value Formula. This would lead one to believe that the results would be similar, yet this has not been found to be the case. However, the difference in interpretations lies, in the opinion of this author, in the sample selected for analysis and the theoretical frame of reference from which the interpretation of the data was made. Rogers' sample is primarily a small, clinical sample, wherein the calculations would logically lead to the theoretical hypothesis that the greater the disparity, the greater the degree of psychoemotional

distress. On the other hand, the samples selected by Zigler were more of a randomly drawn sample of "normal" individuals. Again, the interpretation would follow closely to the theoretical hypothesis.

These two issues lead the present researcher to ask the question, "Is there not a method which will address the tenets of both theoretical frameworks?" The answer seemed more than obvious when the Ratio Formula suggested by James (1890) was examined. This formula seems to accommodate both interpretations, at least theoretically; that is, when there is self-conception disparity and the disparity is negative in nature, which a ratio permits but a subtraction-absolute value does not, then it can be concluded that self-esteem is negative, the degree of negativity being associated with the degree of disparity. This would support the notion of Rogers and his associates. On the other hand, if the calculated self-conception disparity is positive, then one can conclude, as did Zigler and his associates, that the degree of disparity is closely correlated with an individual who can ferret out the disparity and use it positively to motivate himself or herself towards the ideal self-conception. Thus, self-esteem is positive.

Comparing the Two Methods of Calculating Self-Conception Disparity

One of the principal questions of this study was, "Are the two methods of calculating self-conception disparity one and the same?" The results of this study clearly point out that while there is some minimal shared variance, the two methods are not the same. Therefore, theoretically, one can conclude that while both are accepted approaches of calculating self-conception disparity, the empirical evidence of this

study leads one to conclude that, at least across the substantive areas of self-esteem associated with the selected external constructs, there is a difference in the two approaches. In other words, both may be measuring different dimensions of self-conception disparity phenomena.

Perhaps one of the most interesting findings comparing the two basic formulas lies in the negative correlations obtained and presented in Figure 2. One would anticipate, if coming from a psychopathological model, that when an individual disagrees with the ideal statement, thus making their real statement of greater importance, the self-conception disparity generated would be such that there would be, for example, a strong narcissistic orientation. As such, one would logically conclude that there is a strong potential for psychopathology. It is believed, however, that in the population obtained for this study, such a conclusion is erroneous. There are several explanations which seem more feasible. The first lies in the nature of cognitive development. Although it is posited that early adolescents are entering the realm of formal operations, this is basically a new cognitive operation and, as such, it can be suggested that much of their self-conceptions may continue to be concrete in nature. With this in mind, it would not be difficult to assume that adolescents may actually perceive their real self-conceptions as greater than their ideal.

A second plausible explanation may be that formal operations have not been sufficiently developed so as to permit the adolescent to abstract an ideal self-conception which differentiates significantly from the ideal.

A third explanation may be that there are adolescents who are reared in a home environment that facilitates the assimilation of the ideal self-conception in such a manner that it becomes their perceived reality. For

example, if the parents tend towards a "narcissistic" self-perception, the child may incorporate and assimilate a sense of idealism about himself or herself that necessitates that the ideal become their reality. At the other extreme, parents who are "self-derogatory" or "guilt-inducing" may foster an environment that forces the ideal to reflect the reality of that environment.

A fourth explanation may be based in the adolescent's ego development. By this it is meant that there is greater egocentrism at younger ages, which may impede a clear differentiation between the ideal and the real self-conception.

Fifth, it may be the case that there are some self-conceptions which can be clearly delineated so that a real and an ideal self-conception can be perceived; however, it may also be the case that as new, and perhaps more complex, self-conceptions take relevance, this delineation has not been as precisely differentiated due to the required abstraction which comes as formal operations are more functional.

Finally, it may be that the areas selected as representative of the self-conceptions critical to the given ages of the respondents in this sample may represent important areas, though perhaps either not for the selected time period or not sufficiently assimilated to allow for a real and ideal self-conception schema to have developed.

In sum, it appears from the results of this study (yet caution is warranted and further research recommended) that there is a tendency to ascribe to the cognitive-developmental philosophy rather than that of psychopathology.

Comparing the Two Methods of Calculating Self-Conception Disparity Against External Constructs Theoretically Linked to Self-Esteem

In order to gain some understanding as to which of the two methods of deriving self-conception disparity may more accurately empirically operationalize self-conception disparity, at least according to the external constructs utilized in this study, the two formulas were examined for the amount of variance accounted for across several selected external constructs purported in the literature as being correlated with self-esteem. These constructs can be divided into three measures of self-esteem: loneliness, depression, and suicidal ideation. As noted in the results, across all six of the external constructs, the Ratio Formula consistently accounted for more of the variance than did the Subtraction-Absolute Value Formula.

To further test the above conclusion, a goodness-of-fit analysis was incorporated. This is based on the plotting of the residuals against an assumed line of normalcy. The less the deviation of the residuals from the line of normalcy, the better the goodness of fit. The residuals from the Ratio Method of deriving self-conception disparity across all six external constructs fit closer to the line of normalcy than did the self-conception disparity residuals associated with the Subtraction-Absolute Value Formula.

What can be drawn from the results of this study is that the Ratio Method, at least across the six external constructs, has greater predictive power, so far as accounting for the amount of variance, than does the Subtraction-Absolute Value Formula.

The Argument for the Ratio Formula: Calculating Self-Conception Disparity

It is the intent of this researcher to argue, based upon the results of this study, that the Ratio Method of calculating self-conception disparity has not only greater predictive potential but lends itself more clearly to conceptualizing the nature of self-conception disparity.

Not only has this study brought into question the extant methods of calculating self-conception disparity, with the attention of this research most closely examining the Subtraction-Absolute Value Formula, but the work of Wylie (1974) has also done so. Wylie argues against the extant methods on three fundamental grounds. First, Hillson and Worchel (1957), although contending that reverse discrepancies do occur, argue that it is the amount of this form of disparity that is important in the prediction of maladjustment. Wylie (1974), while not offering a substitute method, posits that there is some question as to whether or not disparities in a reverse direction ("I am and I should not be more") have the same meaning as do the disparities of the more usual direction ("I am not and I should be more"). If a large disparity from one part of the scale range indicates poorer self-esteem than a smaller disparity from another part of the scale range, one must question as to whether the researcher is examining cognitive disparity or equal-size degrees of self-esteem (Wylie, 1974). It appears, from the results of this study, that the Ratio Method of calculating self-conception disparity allows for a wider scale range (i.e., positive and negative directions) than does the Subtraction-Absolute Value Method. As such, if two self-conception statements have different meanings, as indicated by Wylie above, it is posited that the

Ratio Formula could provide a mechanism by which cognitive disparity and the amount of self-esteem can be less ambiguously conceptualized.

The second issue is predicated on the first but focuses more specifically on the summation across multiple self-conception disparities to derive a global self-conception disparity score. Such a summation and conclusion would lead one to believe that the derived total self-conception disparity score is somehow related to a global measure of self-esteem (see Openshaw et al., 1981, for arguments against measure of global self-esteem). Wylie (1974) points out that it becomes increasingly difficult to demonstrate that when one sums discrepancies across trait scales, equal-size discrepancies anywhere on any one of numerous trait scales, the summed score will correspond to equal-size cognitive discrepancies or equal degrees of self-esteem.

It is the opinion of this researcher that summation, in general, is flawed and, therefore, based on arguments provided by Openshaw and his associates as well as Wylie, this study recognizes the limitations associated with global measures of any self-referent variable and examines the issue of self-conception disparity and self-esteem across specific external constructs. However, since Wylie's contention has not been empirically validated, and since there may be the possibility that a "global" self-conception score could be generated that is reliably correlated to a "global" measure of self-esteem, this study created a total self-conception disparity score from both methods. The intent was, again, to ask the question as to which method would account for the greater amount of variance across the identified external constructs.

An examination of separate subscales, as analyzed in this study, would address the issue of a global self-conception disparity providing

an equal-size cognitive discrepancy or equal degrees of self-esteem. While this may be accomplished by means of either method of calculation (Subtraction-Absolute Value or Ratio), it is suggested that the Ratio Method lends itself to more significant subscales (refer to Tables 7 through 12). Based on the data for the self-conception disparity scores across the eight subscales, the results suggest that the Ratio Method has greater predictive potential.

The final argument lies in a theoretical assumption underlying the methodological procedure of calculating the self-conception disparity. The assumption suggests that there is a perfect relationship between the cognitive magnitude of the self-conception disparity and the degree of self-esteem experienced. Such an assumption, as noted by Wylie (1979), "is unwarranted on both intuitive, conceptual grounds, and empirical grounds" (p. 90). In other words, what Wylie may be alluding to is that, in some instances, Rogers' explanation would be accurate and, in others, Zigler would be correct; yet from the self-conception disparity score alone, one could not differentiate as to which theoretical position best described the outcome. For example, the statement "I am and I should be more" may be attributed to a higher socio-economic status (SES) individual who is secure within himself or herself and yet aspires to improve. Such a statement, when calculated with the Subtraction-Absolute Value Method, would result in a disparity score of 0. On the other hand, with an identical disparity amount of 0, the individual affirms the statement, "I am not and I should not be more." This answer, however, seems to be one associated with an individual who may have set lower standards for himself or herself, in addition to having a low sense of self-esteem.

It should be noted that the Ratio Method succumbs to the same criticism as does the Subtraction-Absolute Value Method. For this reason, further research must address the relationship between the magnitude of self-conception disparity and amount of self-esteem.

In summary, then, the Ratio Method appears to lend itself more clearly to conceptualizing the nature of self-conception disparity, both conceptually as well as methodologically. Conceptually, the Ratio Method incorporates both the psychopathological theoretical orientation as well as the cognitive-developmental philosophy. Methodologically, the Ratio Method seems, at least according to the results of this study, to have greater predictability than does the Subtraction-Absolute Value Method. While this may be limited to the external constructs selected for this study, it must be remembered that (a) these constructs have been identified as having a strong correlation with self-esteem and (b) perhaps more importantly, three of the external constructs were measures of self-esteem, two with considerable empirical research attesting to their reliability and validity and the other a new measure of self-esteem which, in this study, has high reliability. With this in mind, one must remain cognizant that the amount of variance accounted for was greater with the Ratio Formula than was the variance accounted for with the Subtraction-Absolute Value Formula across these dimensions of self-esteem.

Limitations

Generalizability of the findings of this study is restricted by the relatively homogeneous sample, although care was taken to randomly select schools from various SES areas. As a potential threat to both internal and external validity, selection of the study's participants posed an

additional restriction. With participants volunteering to be in the study, it is possible that those who responded do not represent the population. For example, it is possible that only students who are achievers returned a completed questionnaire. Also, motivation may become a bias consideration in that the instrument was relatively long--361 questions. However, regardless of the bias, two considerations should not be overlooked. First, this was a comparison study of two methods of calculating self-conception disparity applied to the same population. Second, as a landmark study for operationalizing James' ratio formula of self-conception disparity, a broader basis for understanding the phenomena of self-conception disparity is provided, theoretically as well as empirically.

Future Research Directions

Four research directions are suggested from the results of this study in conjunction with extant research addressing the relationship between self-conception disparity and self-esteem. First, conclusions have been drawn regarding the relationship between self-conception disparity and developmental variables such as maturity (e.g., Achenbach & Zigler, 1963), age (e.g., Katz & Zigler, 1967), and a capacity for social guilt (e.g., Glick & Zigler, 1985). It would seem obvious, therefore, that one of the first directions future research would logically take would be to apply the self-conception disparity Ratio Formula across the dimension of age. Questions begin to multiply when one asks at what age does the mechanism of self-conception disparity have an effect and, possibly more importantly, what age-related variables contribute to the comparison that an individual makes; that is, what age-related variables influence the

real self-conception perceptions and the ideal self-conception perceptions that, when compared, result in dimension of self-image and the corresponding affective response (namely, self-esteem).

Second, since few extant studies have looked at gender differences (e.g., Phillips & Zigler, 1980), it would seem advantageous to apply the Ratio Formula across the dimension of gender. This would permit a clearer delineation of self-conception disparity by sex and rule in or out sex-specific self-conceptions.

Next, extant variables could be examined utilizing the Ratio Method. These variables could include individual characteristics such as ability and influenceability, family characteristics such as inter-parental relationships and the family role structure, racial-ethnic characteristics such as stereotypes and childrearing techniques, and socio-economic factors such as differential parental values (Openshaw & Thomas, 1986). Results from the present study show promise that efforts in these directions, as well as many others not mentioned, may provide insightful understanding to the specific self-conception disparity phenomena measured and, consequently, to the resulting feeling of positive or negative self-esteem.

Finally, as noted in the last criticism offered by Wylie (1974), neither the Subtraction-Absolute Value nor the Ratio Formula take into consideration the relationship of self-conception disparity; that is, the cognitive phenomenal aspect thereof and the resultant affective response or self-esteem. This certainly appears to be a critical area of investigation and vital to the ability to theoretically or empirically conceptualize self-conception without ambiguity.

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APPENDICES

Appendix A

Questionnaires

Identification Number _____

Questionnaire for Parents/Guardians of Participating Students

1. Approximate grade level of participating student:

A+ A A- B+ B B- C+ C C- D+ D D- F

2. Marital Status:

Married: _____Both parents in first marriage
_____One spouse in 2nd (3rd etc.) marriage
_____Both parents in 2nd (3rd etc.) marriage

_____Recent (marriage occurred within last year)
_____Not recent (marriage occurred over one year ago)

Divorced _____ _____Recent (occurred within last year)
Widowed _____ _____Not recent (occurred over one year ago)
Separated _____

3. Race:

	Black	Caucasian	Native American	Oriental	Spanish American	Other (Write in)
Mother						
Father						

Student Adopted? _____ If yes, race_____

4. Our family resides in _____
(for example, Salt Lake City, West Valley City, Smithfield, Springville, etc.)

5. Our total family income is approximately:

_____ less than 10,000
_____ 10,000 to 19,999
_____ 20,000 to 29,999
_____ 30,000 to 39,999
_____ 40,000 to 49,999
_____ 50,000 to 74,999
_____ 75,000 to 99,999
_____ 100,000 or more

6. Religious Preference:

	Baptist	Catholic	Episcopalian	L.D.S.	Luthern	Methodist	Presbyterian	Jewish	No Affiliation	Other (Write in)
Adolescent										
Mother										
Father										

7. Occupation:

		Business/Employment (e.g., construction firm, farm, home, hospital)	Position (e.g. secretary, self-employed, homemaker, supervisor)
Father	Primary Occupation	_____	_____
	Secondary Occupation	_____	_____
Mother	Primary Occupation	_____	_____
	Secondary Occupation	_____	_____

8. Education:

	Father		Mother	
	Write in Highest Year Completed	Check if Degree Completed	Write in Highest Year Completed	Check if Degree Completed
Elementary/Jr. High(1-9)				
High School (10-12)				
Trade School (1st-2nd)				
Associate (1st-2nd) (Jr. College)				
Bachelor's (1st-4th)				
Master's (1st-3rd)				
Doctorate (1st-5th)				
Other (Post Doctorate, etc.)				

9. Number of children in family _____
Participating student is _____ (1st born, 2nd born, etc.)

DEAR PARENT: PLEASE PERMIT YOUR ADOLESCENT TO ANSWER THE QUESTIONS ON THE ATTACHED INVENTORY ACCORING TO HIS/HER OWN THINKING.

1

Identification Number _____

Student Questionnaire

Directions: Circle the answer that describes you.

1. My age is: 10 11 12 13 14 15 16 17
   18 19 20 21 22 23 24

2. I am: Male Female

3. My grade is: 6th 7th 8th 9th 10th 11th 12th

   College: Freshman Sophomore Junior Senior

   Are you currently living at home? YES NO

Read the following statements and circle the number that best describes how you feel about the statement. PLEASE RESPOND TO ALL STATEMENTS BY YOURSELF. THERE IS NO RIGHT OR WRONG ANSWER.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. My parents see me as a person who can take criticism.	1	2	3	4	5
*2. I should be happier than I am.	1	2	3	4	5
3. Family members hardly ever lose their tempers.	1	2	3	4	5
*4. I am a moral person (honest, trustworthy, loyal).	1	2	3	4	5
5. I am proud of the changes my body makes.	1	2	3	4	5
6. There are set ways of doing things at home.	1	2	3	4	5
7. Rules are pretty inflexible in our household.	1	2	3	4	5
8. We often seem to be wasting time at home.	1	2	3	4	5
*9. I am a morally weak person (dishonest, untrustworthy, disloyal).	1	2	3	4	5
10. My friends see me as an unhappy person.	1	2	3	4	5
11. There is very little group spirit in our family.	1	2	3	4	5

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	2
12. We come and go as we want to in our family.	1	2	3	4	5	
13. Being on time is very important in our family.	1	2	3	4	5	
14. My parents see me as being a calm and relaxed person.	1	2	3	4	5	
15. Family members sometimes hit each other.	1	2	3	4	5	
16. I wake up several hours earlier than I used to and cannot get back to sleep.	1	2	3	4	5	
17. I am satisfied with myself.	1	2	3	4	5	
*18. I find it rather difficult to relax and remain calm.	1	2	3	4	5	
19. I feel good about the amount of self-confidence I have.	1	2	3	4	5	
20. There are lots of interesting things in life that I really look forward to.	1	2	3	4	5	
21. My parents think I am a failure.	1	2	3	4	5	
22. Family members often try to one-up or out-do each other.	1	2	3	4	5	
23. My parents see me as sticking to a problem until it is finished.	1	2	3	4	5	
24. For me there doesn't seem to be much in life that's really worth doing.	1	2	3	4	5	
25. I feel badly because my parents don't understand the way I am.	1	2	3	4	5	
26. Family members really help and support one another.	1	2	3	4	5	
27. I am too tired to do anything.	1	2	3	4	5	
*28. I should be a greater source of pride to my parents than I am.	1	2	3	4	5	
*29. I should be better able to follow through when I say I will do something.	1	2	3	4	5	
30. There are people I can talk to.	1	2	3	4	5	

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
31. I feel good about the amount of warmth and affection I give to my friends.	1	2	3	4	5
32. We don't do things our own way very often in our family.	1	2	3	4	5
33. Family members sometimes get so angry they throw things.	1	2	3	4	5
34. We are usually careful about what we say to each other in our family.	1	2	3	4	5
*35. I should be more accepted by the opposite sex than I am.	1	2	3	4	5
*36. I should be more confident in myself.	1	2	3	4	5
37. I have a lot in common with the people around me.	1	2	3	4	5
*38. I am an embarrassment to my parents.	1	2	3	4	5
39. Money and paying bills is openly talked about in our family.	1	2	3	4	5
40. I feel that the future is hopeless and that things cannot improve.	1	2	3	4	5
41. I take a positive attitude toward myself.	1	2	3	4	5
42. My family is generally very neat and orderly.	1	2	3	4	5
43. All in all, I am inclined to feel I am a failure.	1	2	3	4	5
44. I don't get irritated at all by the things that used to irritate me.	1	2	3	4	5
45. I feel guilty all of the time.	1	2	3	4	5
*46. I am in control of myself.	1	2	3	4	5
47. My parents see me as an unhappy person.	1	2	3	4	5
48. I used to be able to cry, but now I can't cry even though I want to.	1	2	3	4	5
49. There is a strong emphasis on following rules in our family.	1	2	3	4	5
50. I blame myself for everything bad that happens.	1	2	3	4	5
51. I feel good about being able to take criticism.	1	2	3	4	5

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
52. People change their minds often in our family.	1	2	3	4	5
53. I am happy because I am close to my parents.	1	2	3	4	5
54. I'm happy because people can depend on me.	1	2	3	4	5
55. It's hard to "blow off steam" at home without upsetting somebody.	1	2	3	4	5
56. At times I think I am no good at all.	1	2	3	4	5
57. My friends see me as accepting the changes in my body.	1	2	3	4	5
*58. I am a happy person.	1	2	3	4	5
59. I am dissatisfied or bored with everything.	1	2	3	4	5
60. I think about death, which ends all our problems.	1	2	3	4	5
*61. I do not like the changes occurring to my body.	1	2	3	4	5
62. I hate myself.	1	2	3	4	5
63. My parents think I am as sure of myself as most others my age.	1	2	3	4	5
64. I don't like myself when I am tense and up tight.	1	2	3	4	5
*65. I share everything about me with my friends.	1	2	3	4	5
66. We think things out for ourselves in our family.	1	2	3	4	5
*67. I am dependable.	1	2	3	4	5
68. I feel left out.	1	2	3	4	5
69. My parents see me as capable and smart as most others my age.	1	2	3	4	5
70. There are people I feel close to.	1	2	3	4	5
*71. I like myself the way I am.	1	2	3	4	5
*72. I often act on the spur of the moment without thinking.	1	2	3	4	5
73. I have no appetite at all anymore.	1	2	3	4	5

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	5
74. My parents think I am an attractive person.	1	2	3	4	5	
75. I feel I do not have much to be proud of.	1	2	3	4	5	
76. Because my parents are proud of me, I feel good about myself.	1	2	3	4	5	
77. My friends accept me for who I am.	1	2	3	4	5	
78. Dishes are usually done immediately after eating.	1	2	3	4	5	
79. My social relationships are phony.	1	2	3	4	5	
80. My parents think that I am unable to make important decisions by myself.	1	2	3	4	5	
81. In our family, we are strongly encouraged to be independent.	1	2	3	4	5	
92. In our family, we believe you don't ever get anywhere by raising your voice.	1	2	3	4	5	
83. I am so sad or unhappy that I can't stand it.	1	2	3	4	5	
84. My parents see me as in control of myself.	1	2	3	4	5	
85. If there's a disagreement in our family, we try hard to smooth things over and keep the peace.	1	2	3	4	5	
*86. I can't make important decisions without help.	1	2	3	4	5	
*87. I am an attractive person.	1	2	3	4	5	
88. When I am around members of the opposite sex, I feel good about myself.	1	2	3	4	5	
*89. I am a successful person.	1	2	3	4	5	
90. I feel I am being punished.	1	2	3	4	5	
*91. I don't like the way I am.	1	2	3	4	5	
*92. I am a person who is calm and relaxed.	1	2	3	4	5	
*93. I share nothing about me with my friends.	1	2	3	4	5	
94. I feel bad about being an unfriendly person.	1	2	3	4	5	
95. I have lost more than 15 pounds without purposely trying to.	1	2	3	4	5	

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	6
96. I have lost all of my interest in other people.	1	2	3	4	5	
*97. I am not a friendly person.	1	2	3	4	5	
98. Lately, I don't "give a darn" what happens to me.	1	2	3	4	5	
99. We put a lot of energy into what we do at home.	1	2	3	4	5	
*100. I am understood by my parents.	1	2	3	4	5	
101. I feel good because I am a moral person (honest, trustworthy, loyal).	1	2	3	4	5	
102. I am angry and resentful when criticized.	1	2	3	4	5	
*103. I am a warm and affectionate person.	1	2	3	4	5	
104. I am unhappy being so withdrawn.	1	2	3	4	5	
105. You can't get away with much in our family.	1	2	3	4	5	
106. I am so worried about my health, that I cannot think about anything else.	1	2	3	4	5	
107. I feel good about myself because I am a successful person.	1	2	3	4	5	
108. I feel I am a person of worth, at least on an equal plane with others.	1	2	3	4	5	
109. There is very little privacy in our family.	1	2	3	4	5	
110. My friends think I am as sure of myself as they are.	1	2	3	4	5	
111. There are very few rules to follow in our family.	1	2	3	4	5	
112. My friends see me as sticking to a problem until it is finished.	1	2	3	4	5	
113. Life for me has become empty and meaningless.	1	2	3	4	5	
114. My friends know they can count on me.	1	2	3	4	5	
*115. I am close to my parents.	1	2	3	4	5	
*116. I should be more attractive than I am.	1	2	3	4	5	

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	7
*117. I continue working on a problem even when I do not get it right the first time.	1	2	3	4	5	
*118. I should worry less than I do.	1	2	3	4	5	
119. My friends think I am an attractive person.	1	2	3	4	5	
*120. I worry frequently.	1	2	3	4	5	
121. We fight a lot in our family.	1	2	3	4	5	
122. There are people who really understand me.	1	2	3	4	5	
123. I can't do any work at all.	1	2	3	4	5	
124. There is plenty of time and attention for everyone in our family.	1	2	3	4	5	
125. Activities in our family are pretty carefully planned.	1	2	3	4	5	
126. I feel in tune with the people around me.	1	2	3	4	5	
*127. I should accept the changes in my body more than I do.	1	2	3	4	5	
128. Everyone has an equal say in family decisions.	1	2	3	4	5	
129. My interests and ideas are not shared by those around me.	1	2	3	4	5	
*130. I should have more self-control.	1	2	3	4	5	
*131. I am able to take criticism without resentment.	1	2	3	4	5	
132. My parents see me as accepting the changes in my body.	1	2	3	4	5	
133. Family members rarely become openly angry.	1	2	3	4	5	
134. There is a feeling of togetherness in our family.	1	2	3	4	5	
*135. I am as sure of myself as most others my age.	1	2	3	4	5	
136. Family members almost always rely on themselves when a problem comes up.	1	2	3	4	5	
*137. I should be more capable and smart.	1	2	3	4	5	

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	8
138. Someone usually gets upset if you complain in our family.	1	2	3	4	5	
139. I feel happy about the things I share about myself with my friends.	1	2	3	4	5	
*140. I can accept the changes in my body.	1	2	3	4	5	
*141. I should be more friendly than I am.	1	2	3	4	5	
142. I am no longer close to anyone.	1	2	3	4	5	
143. No one really knows me well.	1	2	3	4	5	
*144. My parents don't understand me.	1	2	3	4	5	
145. I lack companionship.	1	2	3	4	5	
146. Family members often criticize each other.	1	2	3	4	5	
147. I can't make decisions at all anymore.	1	2	3	4	5	
148. I feel good when I accomplish something difficult.	1	2	3	4	5	
*149. I shouldn't give up as quickly as I do when things go wrong.	1	2	3	4	5	
150. My parents think that I am a moral person (honest, trustworthy, loyal).	1	2	3	4	5	
*151. I am an unhappy person.	1	2	3	4	5	
*152. I would change myself if I could.	1	2	3	4	5	
153. I feel I have a number of good qualities.	1	2	3	4	5	
154. I am unhappy because I am not as capable and smart as most others my age.	1	2	3	4	5	
*155. I am basically free of worries and cares.	1	2	3	4	5	
*156. I should be more successful.	1	2	3	4	5	
157. Each person's duties are clearly defined in our family.	1	2	3	4	5	
158. There is one family member who makes most of the decisions.	1	2	3	4	5	

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	9
159. In our family, if we feel like doing something on the spur of the moment, we often just pick up and go.	1	2	3	4	5	
*160. I should be better understood by my parents.	1	2	3	4	5	
161. I do not feel alone.	1	2	3	4	5	
162. It's hard to be by yourself without hurting someone's feelings in our household.	1	2	3	4	5	
163. In our home, we tell each other about our personal problems.	1	2	3	4	5	
164. We rarely volunteer when something has to be done at home.	1	2	3	4	5	
165. I feel part of a group of friends.	1	2	3	4	5	
*166. I should be less nervous and jumpy.	1	2	3	4	5	
167. There is no one I can turn to.	1	2	3	4	5	
*168. I am able to make important decisions without help.	1	2	3	4	5	
*169. I should be a more warm and affectionate person.	1	2	3	4	5	
170. We are not really encouraged to speak up for ourselves in our family.	1	2	3	4	5	
171. There are people I can turn to.	1	2	3	4	5	
172. I am unhappy because I am not sure of myself.	1	2	3	4	5	
*173. I should be closer to my parents than I am.	1	2	3	4	5	
174. I feel good about the way I look.	1	2	3	4	5	
*175. I should share more about me with my friends.	1	2	3	4	5	
176. We really get along well with each other in our family.	1	2	3	4	5	
177. Family members strongly encourage each other to stand up for their rights.	1	2	3	4	5	
178. I feel that I'm at the "end of my rope" and don't want to go on any more.	1	2	3	4	5	

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	10
*179. I lack self-confidence.	1	2	3	4	5	
180. Family members often keep their feelings to themselves.	1	2	3	4	5	
*181. I am a source of pride to my parents.	1	2	3	4	5	
*182. I should be a more decent person.	1	2	3	4	5	
*183. I am undependable.	1	2	3	4	5	
*184. I am an unattractive person.	1	2	3	4	5	
185. I wish I could have more respect for myself.	1	2	3	4	5	
186. My friends think that I am a moral person (honest, trustworthy, loyal).	1	2	3	4	5	
187. I feel isolated from others.	1	2	3	4	5	
188. People are around me but not with me.	1	2	3	4	5	
189. My friends think that I am unable to make important decisions by myself.	1	2	3	4	5	
190. My friends see me as a confident person.	1	2	3	4	5	
191. I am an outgoing person.	1	2	3	4	5	
192. We can do whatever we want to in our family.	1	2	3	4	5	
*193. I do not get along with the opposite sex.	1	2	3	4	5	
194. I feel satisfied with myself.	1	2	3	4	5	
195. It bothers me that I worry so much.	1	2	3	4	5	
*196. I get along well with the opposite sex.	1	2	3	4	5	
*197. I should be more sure of myself.	1	2	3	4	5	
198. I am able to do things as well as most other people.	1	2	3	4	5	
199. Family members make sure their rooms are neat.	1	2	3	4	5	
*200. I have confidence in myself.	1	2	3	4	5	
*201. I am as capable and smart as most others my age.	1	2	3	4	5	

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	11
*202. Family members really back each other up.	1	2	3	4	5	
*203. I should be better able to make important decisions without help.	1	2	3	4	5	
204. My parents accept me for who I am.	1	2	3	4	5	
*205. I am not close to my parents.	1	2	3	4	5	
*206. I should be able to take criticism without feeling the anger and resentment that I do.	1	2	3	4	5	
207. My friends see me as being a calm and relaxed person.	1	2	3	4	5	
*208. I have a tendency to give up easily when problems are difficult.	1	2	3	4	5	
209. It's often hard to find things when you need them in our household.	1	2	3	4	5	
*210. I am a friendly person.	1	2	3	4	5	
*211. I am not as sure of myself as most others my age.	1	2	3	4	5	
212. My parents think that I worry too much.	1	2	3	4	5	
213. I would kill myself if I had the chance.	1	2	3	4	5	
214. I believe that I look ugly.	1	2	3	4	5	
*215. I am a cold and hostile person.	1	2	3	4	5	
216. Family members are rarely ordered around.	1	2	3	4	5	
217. Money is not handled very carefully in our family.	1	2	3	4	5	
218. There is plenty of time and attention for everyone in our family.	1	2	3	4	5	
219. We say anything we want to around home.	1	2	3	4	5	
220. My friends think that I worry too much.	1	2	3	4	5	
221. My parents see me as a confident person.	1	2	3	4	5	
222. My friends think I am a failure.	1	2	3	4	5	
223. My friends see me as in control of myself.	1	2	3	4	5	

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	12
224. My friends see me as a person who can take criticism.	1	2	3	4	5	
225. I feel good about the amount of self-control I have.	1	2	3	4	5	
226. I certainly feel useless.	1	2	3	4	5	
227. I can find friends when I want them.	1	2	3	4	5	
228. I feel happy most of the time.	1	2	3	4	5	
229. My parents know they can count on me.	1	2	3	4	5	
*230. I am not as capable and smart as most others my age.	1	2	3	4	5	
231. I feel I am a complete failure as a person.	1	2	3	4	5	
232. My friends see me as capable and smart as they are.	1	2	3	4	5	
*233. I am a failure.	1	2	3	4	5	
234. I'm proud of the important decisions I've made by myself.	1	2	3	4	5	

*Disparity items

13

Between each pair of words place an "X" on the space that fits your answer.

Describe how you see yourself.

1.	Clever:	____	____	____	____	____	:Foolish
2.	Powerful:	____	____	____	____	____	:Powerless
3.	Intelligent:	____	____	____	____	____	:Stupid
4.	Attractive:	____	____	____	____	____	:Unattractive
5.	Confident:	____	____	____	____	____	:Unsure
6.	Sociable:	____	____	____	____	____	:Unsociable
7.	Friendly:	____	____	____	____	____	:Unfriendly
8.	Happy:	____	____	____	____	____	:Sad
9.	Good:	____	____	____	____	____	:Bad
10.	Honest:	____	____	____	____	____	:Dishonest
11.	Dependable:	____	____	____	____	____	:Undependable

Describe how your parents see you.

1.	Clever:	____	____	____	____	____	:Foolish
2.	Powerful:	____	____	____	____	____	:Powerless
3.	Intelligent:	____	____	____	____	____	:Stupid
4.	Attractive:	____	____	____	____	____	:Unattractive
5.	Confident:	____	____	____	____	____	:Unsure
6.	Sociable:	____	____	____	____	____	:Unsociable
7.	Friendly:	____	____	____	____	____	:Unfriendly
8.	Happy:	____	____	____	____	____	:Sad
9.	Good:	____	____	____	____	____	:Bad
10.	Honest:	____	____	____	____	____	:Dishonest
11.	Dependable:	____	____	____	____	____	:Undependable

Describe how your friends see you.

1.	Clever:	____	____	____	____	____	:Foolish
2.	Powerful:	____	____	____	____	____	:Powerless
3.	Intelligent:	____	____	____	____	____	:Stupid
4.	Attractive:	____	____	____	____	____	:Unattractive
5.	Confident:	____	____	____	____	____	:Unsure
6.	Sociable:	____	____	____	____	____	:Unsociable
7.	Friendly:	____	____	____	____	____	:Unfriendly
8.	Happy:	____	____	____	____	____	:Sad
9.	Good:	____	____	____	____	____	:Bad
10.	Honest:	____	____	____	____	____	:Dishonest
11.	Dependable:	____	____	____	____	____	:Undependable

14

Read the following questions and circle T (true) or F (false):

1. I almost always think before I act.	T	F
2. I stay cool even when I'm really angry with someone.	T	F
3. I have a strong need to feel like an important person.	T	F
4. I sort of feel sad when I see someone who's lonely.	T	F
5. I'm sure of my feelings about most things.	T	F
6. I always try to do what is proper.	T	F
7. I am a quiet and cooperative person.	T	F
8. I'm pretty sure I know who I am and what I want in life.	T	F
9. I feel guilty when I have to lie to a friend.	T	F
10. I try hard to do well at almost everything I do.	T	F
11. I become very excited or upset once a week or more.	T	F
12. When I get angry, I usually cool down and let my feelings pass.	T	F
13. I'm quite sure that I am attractive.	T	F
14. I like to follow instructions and do what others expect of me.	T	F
15. I have more friends than I can keep up with.	T	F
16. I am very uneasy when I'm supposed to tell people what to do.	T	F
17. I like the way I look.	T	F
18. I do my very best not to hurt people's feelings.	T	F
19. I am more worried about finishing things that I start than most people.	T	F
20. I can depend on my parents to be understanding of me.	T	F
21. I would never use drugs, no matter what.	T	F
22. Rather than demand things, people can get what they want by being gentle and thoughtful.	T	F
23. It is very important that children learn to obey their elders.	T	F

Read the following questions and circle T (true) or F (false): 15

24. I have a pretty clear idea of what I want to do. T F
25. It is easy for me to take advantage of people. T F
26. I'd like to trade bodies with someone else. T F
27. I like to arrange things down to the last detail. T F
28. In this world, you either push or get shoved. T F
29. My social life is very satisfying to me. T F
30. When someone hurts me, I try to forget it. T F
31. I have a strong desire to win any game I play with others. T F
32. I think I have a good physical build. T F
33. I have almost no close ties with others my age. T F
34. I have faith that human nature is good. T F
35. If I see a person I know from a distance, I usually try to avoid the person. T F
36. My friends seem to turn to me more than to others when they have problems. T F
37. I make friends easily. T F
38. I usually let other people have their own way. T F
39. I'm always busy in lots of social activities. T F
40. I don't seem to know what I want out of life. T F
41. Other people my age seem more sure than I am of who they are and what they want. T F
42. I often doubt whether people are really interested in what I am saying to them. T F
43. I find it hard to feel sorry for people who are always worried about things. T F
44. I seem to have a problem getting along with other teenagers. T F
45. I would much rather follow someone than be the leader. T F
46. To get ahead in this world I'm willing to push people who get in my way. T F

Read the following questions and circle T (true) or F (false): 16

47. I can see more sides of a problem better than others can. T F
48. Becoming involved in other people's problems is a waste of time. T F
49. I guess I'm a complainer who expects the worst to happen. T F
50. I often do things for no reason other than it might be fun. T F
51. It is not unusual to feel lonely and unwanted. T F
52. I do my best to stop anyone from trying to boss me. T F
53. I am a dramatic and showy sort of person. T F
54. I would rather be direct with people than avoid telling them something they don't like. T F
55. Among the most important things a person can have are a strong will and the drive to get ahead. T F
56. I often get so stoned (either from alcohol or drugs) that I don't know what I'm doing. T F
57. I very often think I am not wanted by others in a group. T F
58. People can influence me quite easily. T F
59. I often feel so angry that I want to throw and break things. T F
60. I often say things that I regret having said. T F
61. I guess I depend too much on others to be helpful to me. T F
62. I feel left out of things socially. T F
63. I like to be the one in authority to take charge of things. T F
64. I don't mind that other teenagers are not interested in my friendship. T F
65. I am very pleased with all the things I have done up to now. T F
66. Others my age never seem to call me to get together with them. T F
67. I like to tell others about the things I have done well. T F
68. If you asked me to describe myself I wouldn't know what to say. T F
69. I don't depend much on other people for friendship. T F
70. I doubt if I'll make much of myself in life. T F

Read the following questions and circle T (true) or F (false):

71. To see someone suffering doesn't bother me. T F

72. Most people are better looking than I am. T F

73. A quiet hobby is more fun for me than a party. T F

74. I worry about my looks. T F

75. I'm among the more popular kids at school. T F

76. There are always a number of reasons why most problems can't be solved. T F

77. I do my best to get along with others by being pleasant and agreeable. T F

78. It is good to have a regular way of doing things so as to avoid mistakes. T F

79. I seem to fit in right away with any group of new kids I meet. T F

80. I've done most things in my life very well. T F

81. If I want to do something, I just do it without thinking of what might happen. T F

82. So little of what I have done has been appreciated by others. T F

83. I make nasty remarks to people if they deserve it. T F

84. I think I'm better looking than most of the kids I know. T F

85. I'm very mature for my age and know what I want to do in life. T F

86. I like being in a crowd just to be with lots of people. T F

87. In many ways I feel very superior to most people. T F

88. Most other teenagers don't seem to like me. T F

89. Most people can be trusted to be kind and thoughtful. T F

90. I like to flirt a lot. T F

91. I often feel that others do not want to be friendly to me. T F

92. It is very difficult for me to stop feelings from coming out. T F

93. I can control my feelings easily. T F

Appendix B

Brief Description of the Proposed Self-Esteem Project

Brief Description of the Proposed Self-Esteem Project

Dr. Kim Openshaw and two of his students, Layne Bennion and Diane Stuart, are conducting a research project focusing on self-esteem.

Self-esteem, as you may know, is how we feel about ourselves and our performance in school, home, or at work. Many young adults find it difficult to feel good about themselves as they experience changes in their lives and face major decisions. As you may have experienced, low self-esteem effects everything you try to do. Although the notion of self-esteem is common knowledge, there remains much to discover about it's roots and development. Because of the importance of self-esteem in young adults' lives, this project has been initiated.

This class has been selected to participate in this study dealing with the conceptualization of self-esteem along with approximately 1500 other junior high, middle school, high school and college students throughout Utah and southern Idaho.

Participation in this study involves completing a questionnaire composed of items from several commonly used self-esteem surveys, personality measures and a family environment scales in order to understand what aspects of a person and their surroundings are related to self-esteem.

The questionnaire will take approximately 30 minutes to one hour to complete.

No one will know what answers you put down. The questionnaires are identified only by a number.

If you would like to participate, take a home a parent consent form which your parents sign indicating their permission for you to participate. In a few days (or specify date if a time has already been set up) Dr. Openshaw or one of his students will visit the class to explain more about the project and give those who are interested questionnaires. You need to have your parents permission to participate.

Dear Teachers:

Many parents and teachers have indicated that one quality they desire their students and children to achieve is positive self-esteem. Feeling positive about him/herself is directly related to how well your students are able to perform in school or at home and will affect which future paths your son or daughter may choose to follow. Although the notion of self-esteem is common knowledge, there remains much to discover about it's roots and development. Because of the importance of self-esteem in young people's lives, this project has been initiated.

Presently, self-esteem is thought of as a single personality construct. Some recent research indicates, however, that self-esteem may be multidimensional; that is, what is frequently labeled as self-esteem may actually be several different interacting parts of the personality. We believe this study will help provide a clearer understanding of what self-esteem is and how it functions in the personality and enable educators, social scientists and clinicians who work with adolescents to more accurately guide the development of self-esteem.

Your class has been randomly selected to participate in a study dealing with the conceptualization of self-esteem along with approximately 1500 other junior high, middle school, high school and college students throughout Utah and southern Idaho.

The students in your class is asked to complete a questionnaire composed of items from several commonly used self-esteem instruments, personality measures (e.g., character traits, loneliness, suicidal thoughts and depression) and family environment scales in order to understand what aspects of a person and their surroundings are related to self-esteem. The questionnaire will take approximately 30 minutes to 1 hour to complete.

In addition, we are asking that the parents of the participating students fill out a short, two-page demographic form attached to the student questionnaire.

Participation in this project is voluntary and participants can choose to discontinue participation at any time. There is no foreseeable risk associated with your students' participation in this study. However, some research suggests that individuals already feeling depressed or who are currently contemplating suicide may experience an increase in symptoms when exposed to information related to their disorder (e.g., through the news media, television programs or questionnaires). If you notice any changes in your students which are of concern to you, we encourage you to seek appropriate mental health intervention.

Any information which would identify a particular child, family or school will be held strictly confidential. Your students' name will not be associated with his/her answers in any form as the questionnaires are identified by number. Any reported results from

this study, will be presented as group findings, never as individual responses.

The school superintendent and principal are aware of this project and have given their permission for us to randomly select classrooms in the district to ask for student participation.

Although the analysis of the data will take several months, we will be happy to share a summary of the findings with any interested parents or participants. If you are interested in the results of this study, write your name and mailing address in the space provided below and we will send you a copy.

Participating students are to return the completed forms to you tomorrow and a member of the research staff will return and collect the questionnaires.

May we express appreciation in advance for your support of this project. If you have any questions about participation, please feel free to contact us.

Sincerely,

Dr. D. Kim Openshaw
Principal Investigator,
Associate Professor of Family and Human Development,
Associate Director of the
Laboratory for Adolescent Research
(801) 750-1548

Layne D. Bennion
Project Director
(801) 753-3578

Diane Stuart
Research
Assistant
(801) 750-1544

Department of Family and Human Development
Utah State University
Logan, Utah 84322-2905

Teacher Informed Consent

I have read the above information and agree to allow my son/daughter to participate in this study.

_____ _____
(Signature) (Date)

I would like to receive a summary of the research findings.

Name _____
Mailing Address _____

Dear Parents:

Many parents have indicated that one quality they desire their children to achieve is positive self-esteem. Feeling positive about him/herself is directly related to how well your son or daughter is able to perform in school or at home and will affect which future paths your son or daughter may choose to follow. Although the notion of self-esteem is common knowledge, there remains much to discover about it's roots and development. Because of the importance of self-esteem in young people's lives, this project has been initiated.

Presently, self-esteem is thought of as a single personality construct. Some recent research indicates, however, that self-esteem may be multidimensional; that is, what is frequently labeled as self-esteem may actually be several different interacting parts of the personality. We believe this study will help provide a clearer understanding of what self-esteem is and how it functions in the personality and enable educators, social scientists and clinicians who work with adolescents to more accurately guide the development of self-esteem.

Your son or daughter has been randomly selected to participate in a study dealing with the conceptualization of self-esteem along with approximately 1500 other junior high, middle school, high school and college students throughout Utah and southern Idaho.

Your student is asked to complete a questionnaire composed of items from several commonly used self-esteem instruments, personality measures (e.g., character traits, loneliness, suicidal thoughts and depression) and family environment scales in order to understand what aspects of a person and their surroundings are related to self-esteem. The questionnaire will take approximately 30 minutes to 1 hour to complete. Should you choose to allow your student to participate, we ask that you encourage him/her to fill out the questionnaire and return it to his/her teacher tomorrow.

In addition, we are asking that the parents of the participating students fill out a short, two-page demographic form attached to the student questionnaire.

Participation in this project is voluntary and participants can choose to discontinue participation at any time. There is no foreseeable risk associated with your student's participation in this study. However, some research suggests that individuals already feeling depressed or who are currently contemplating suicide may experience an increase in symptoms when exposed to information related to their disorder (e.g., through the news media, television programs or questionnaires). If you notice any changes in your son or daughter which are of concern to you, we encourage you to seek appropriate mental health intervention.

Any information which would identify a particular child, family or school will be held strictly confidential. Your son or daughter's name will not be associated with his/her answers in any form as the

questionnaires are identified by number. Any reported results from this study, will be presented as group findings, never as individual responses.

The school superintendent and principal are aware of this project and have given their permission for us to randomly select classrooms in the district to ask for student participation.

Although the analysis of the data will take several months, we will be happy to share a summary of the findings with any interested parents or participants. If you are interested in the results of this study, write your name and mailing address in the space provided below and we will send you a copy.

May we express appreciation in advance for your support of this project. If you have any questions about participation, please feel free to contact us.

Sincerely,

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Department of Family and Human Development
Utah State University
Logan, Utah 84322-2905

Parental Informed Consent

I have read the above information and agree to allow my son/daughter to participate in this study.

_____ _____
(Signature) (Date)

I would like to receive a summary of the research findings.

Name _____
Mailing Address _____

Dear Participant:

Many young people find it difficult to feel good about themselves as they go through the changes of growing into adults. How we feel about ourselves is called self-esteem. As you may have experienced, it is hard to do well when you don't feel good about yourself. Because it is important to help teenagers develop good feelings about themselves, we are studying self-esteem to better understand what it is. Specifically, we are looking at self-esteem in teenagers to see if self-esteem is a single part of your personality or if it is actually composed of several smaller parts of your personality.

You have been selected to participate in our study about self-esteem with about 1500 other junior high, middle school, high school and college students in Utah and southern Idaho.

We would like you to fill out the questionnaires passed out to you according to how you feel about yourself. The questionnaires will take 30 minutes to about one hour to complete.

Participation in this study is voluntary, so you have the choice of deciding whether you would like to complete the inventories. You may choose not to participate at any time without any negative effects to you or your grade. There are no known risks to you if you participate. No one will be told what answers you put down. Only the professor, Dr. D. Kim Openshaw, in charge of this project, and those working with him, will see your answers, but they will not know the names of those who fill out the questionnaires.

We think this study will help scientists better understand the concept of self-esteem, what it means and what we can do to help young people feel better about themselves as they develop.

Thank you for helping us and sharing with us your feelings.

Sincerely,

Dr. D. Kim Openshaw
Principal Investigator
(801) 750-1548

Layne D. Bennion
Project Director
(801) 753-3578

Diane Stuart
Research Assistant
(801) 750-1544

Department of Family and Human Development
Utah State University
Logan, Utah 84322-2905

Participant Informed Consent

I have discussed the project with Dr. Openshaw or one of his assistants, read the above information and agree to participate in this study.

_____ _____

(Signature) (Date)

Dear Participants:

Many young adults find it difficult to feel good about themselves as they experience changes in their lives and face major decisions. As you may have experienced, low self-esteem effects everything you try to do. Although the notion of self-esteem is common knowledge, there remains much to discover about it's roots and development. Because of the importance of self-esteem in young adults' lives, this project has been initiated.

Presently, self-esteem is thought of as a single personality construct. Some recent research indicates, however, that self-esteem may be multidimensional; that is, what is frequently labeled as self-esteem may actually be several different interacting parts of the personality. We believe this study will help provide a clearer understanding of what self-esteem is and how it functions in the personality and enable educators, social scientists and clinicians who work with adolescents and young adults to more accurately guide the development of self-esteem.

Your class has been selected to participate in a study dealing with the conceptualization of self-esteem along with approximately 1500 other junior high, middle school, high school and college students throughout Utah and southern Idaho.

Participation in this study involves completing a questionnaire composed of items from several commonly used self-esteem instruments, personality measures (e.g., character traits, loneliness, suicidal thoughts and depression) and family environment scales in order to understand what aspects of a person and their surroundings are related to self-esteem. Fill out the questions relating to the family as if you were living at home. The questionnaire will take approximately 30 minutes to 1 hour to complete. Should you choose to participate, we ask that you fill out the questionnaire and bring it to the next class period.

For junior high and high school students that participated, we asked the parents to fill out the first two pages of demographic information. Please complete these first two pages yourself as if you were presently living at home.

Participation in this project is voluntary and participants can choose to discontinue participation at any time. There is no foreseeable risk associated with your involvement in this study. However, some research suggests that individuals already feeling depressed or who are currently contemplating suicide may experience an increase in symptoms when exposed to information related to their disorder (e.g., through the news media, television programs or questionnaires). If you notice any changes in yourself, which are of concern to you, we encourage you to seek appropriate mental health intervention.

Any information which would identify a particular student, family or school will be held strictly confidential. Your name will not be

associated with your answers in any form as the questionnaires are identified by number. Any reported results from this study, will be presented as group findings, never as individual responses.

Although the analysis of the data will take several months, we will be happy to share a summary of the findings with any interested participants. If you are interested in the results of this study, write your name and mailing address in the space provided below and we will send you a copy.

May we express appreciation in advance for your support of this project. If you have any questions about participation, please feel free to contact us.

Sincerely,

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Research Assistant
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Department of Family and Human Development
Utah State University
Logan, Utah 84322-2905

Participant Informed Consent

I have read the above information and agree to participate in this study.

_____ (Signature) _____ (Date)

I would like to receive a summary of the research findings.

Name _____
Mailing Address _____

Appendix C

Formula Score Variations

	Ratio	Subtraction-Absolute Value
I am and I should not be more	1/5=.2	1-5=4
I am and I should not be more	1/4=.25	1-4=3
I am and I don't know if I should be more	1/3=.33	1-3=2
I am and I should not be more	2/5=.4	2-5=3
I am and I should be more	1/2=.5	1-2=1
I am and I should not be more	2/4=.5	2-4=2
I don't know if I am and I should not be more	3/5=.6	3-5=2
I am and I don't know if I should be more	2/3=.67	2-3=1
I don't know if I am and I should not be more	3/4=.75	3-4=1
I am not and I should not be more	4/5=.8	4-5=1
I am and I should be more	1/1=1	1-1=0
I don't know if I am and I don't know if I should be more	3/3=1	3-3=0
I am not and I should not be more	4/4=1	4-4=0
I am not and I should not be more	5/5=1	5-5=0
I am not and I should not be more	5/4=1.25	5-4=1
I am not and I don't know if I should be more	4/3=1.33	4-3=1
I don't know if I am and I should be more	3/2=1.5	3-2=1
I am not and I don't know if I should be more	5/3=1.67	5-3=2
I am and I should be more	2/1=2	2-1=1
I am not and I should be more	4/2=2	4-2=2

	Ratio	Subtraction-Absolute Value
I am not and I should be more	5/2=2.5	5-2=3
I don't know if I am and I should be more	3/1=3	3-1=2
I am not and I should be more	4/1=4	4-1=3
I am not and I should be more	5/1=5	5-1=4

Appendix D

Ratio Frequency Data

Philosophy Statement

Positive-real statement: I am an attractive person.
(Question #87 on the Questionnaire)

Negative-real statement: I am an unattractive person.
(Question #184 on the Questionnaire)

Ideal statement: I should be more attractive than I am.
(Question #116 on the Questionnaire)

Value	Cumulative percent positive-real	Cumulative percent negative-real
.2	7.6	11.0
.25	18.3	33.7
.33	22.3	44.2
.4	26.2	45.3
.5	54.6	69.0
.6	55.4	69.1
.67	68.6	78.3
.75	71.1	79.7
1.00	89.1	93.3
1.25	89.2	93.4
1.33	90.3	93.8
1.5	95.1	97.2
1.67	98.9	97.4
2.00	98.9	99.3
2.5	99.2	99.7
3.00	99.9	99.9
5.00	100.0	100.0

Mood Statement

Positive-real statement: I am basically free of worries and cares.
(Question #155 on the Questionnaire)

Negative-real statement: I worry frequently.
(Question #120 on the Questionnaire)

Ideal statement: I should worry less than I do.
(Question #118 on the Questionnaire)

Value	Cumulative percent positive-real	Cumulative percent negative real
.2	.9	2.7
.25	1.8	4.5
.33	1.9	4.9
.4	3.1	5.7
.5	10.5	18.0
.6	11.5	18.7
.67	15.5	27.2
.75	19.1	28.7
.8	20.2	28.8
1.00	42.8	48.2
1.25	43.5	48.5
1.33	49.5	51.7
1.5	60.1	62.0
1.67	60.8	62.2
2.00	82.9	84.6
2.5	88.0	86.8
3.00	90.2	87.4
4.00	95.4	92.0
5.00	100.0	100.0