

SELF-CONCEPT, SEX-ROLE IDENTITY AND
WEIGHT-CONSCIOUSNESS IN YOUNG
ADOLESCENT FEMALES

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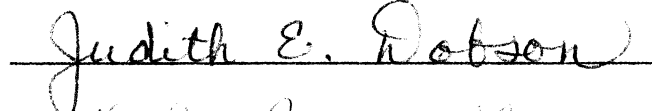
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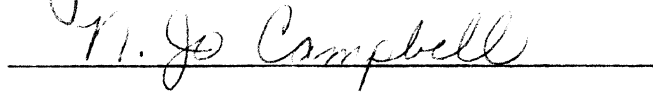
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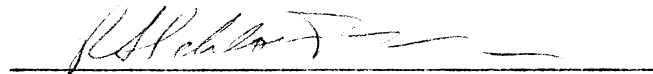
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CHAPTER I

INTRODUCTION

Overview of the Study

The incidence of eating disorders in this country has continued to increase over the past two decades. In fact, some researchers have referred to the increase of these disorders, especially among young adolescents, as alarming (Shisslak, Crago, Neal, & Swain, 1987). As a result, the investigation into the psychological factors contributing to the development of eating disorders has become a matter of growing concern for mental health professionals.

The fact that the female population is more susceptible to the development of eating disorders has been well documented (Striegel-Moore, Silberstein, & Rodin, 1986). Studies by Nielsen (1979) and Nylander (1971) indicated that significantly more women than men reported a practice of restricted eating for the purpose of losing weight. One explanation for this phenomenon is the value that Western society places on attractiveness, and thinness, in particular. Numerous studies suggest that these social norms are applied more strongly to women than to men (Striegel-Moore, et al., 1986).

Although most research has been with college age and high school age females, young females are particularly vulnerable to developing eating disorders. A study conducted by Hawkins, Turell and Jackson (1983) showed that before age 13, 80% of girls reported that they had already been on a weight-loss diet. Only 10% of boys in this age category reported similar experiences.

Bruch's (1978) research indicated that the most frequently cited age for the onset of eating disorders is early adolescence. Young adolescents become concerned with their body image because they learn that appearance is especially important to how they are valued by their peers (Striegel-Moore, et al., 1986). Also during this period, young adolescent females are experiencing a stage of development in which there is an expansion and reorganization of self-concept (Ellis & Davis, 1982). For these young females, body weight and body image become critical factors in the organization of the entire self-concept (Ellis & Davis, 1982, Striegel-Moore, et al., 1986).

Also contributing to the development of healthy self-concept in females is sex-role identity. A study conducted by Bem (1975) indicated that high femininity in females was correlated with low self-concept. Another study by Kelly

and Worell (1977) linked high levels of self-esteem to primarily masculine-valued traits and only minimally to feminine-valued traits.

Extending this concept to the study of eating disorders, it has been conjectured that over concern with one's appearance and attempting to improve perceived physical attractiveness are central features of the female sex-role stereotype. In fact, thinness and femininity appear to be linked (Striegel-Moore, et al., 1986). Thus, young females who identify with the feminine sex-role stereotype are more likely to have lower self-esteem and to more highly value the concept of thinness as a means of physical attractiveness.

This study examined the factors of self-concept and sex-role identity in young adolescent females as predictors of excessive concern with body weight. It also addressed the issue of early identification of weight concern in females as a means of possible prevention of the future development of disturbed eating patterns.

Statement of the Problem

The problem that this study addressed was the possible relationship between levels of self-concept and

types of sex-role identity and excessive weight-consciousness in young adolescent females. The problem of the study was further clarified by asking the following questions:

1. Is weight-consciousness related to the level of self-concept in young adolescent females?
2. Is weight-consciousness related to type of sex-role identity in young adolescent females?
3. Is weight-consciousness related to an interaction of sex-role identity and self-concept in young adolescent females?

Significance of the Study

The problem this study examined was important for a number of reasons. First, the study added to the sparse literature on sex-role identity and the development of eating disorders in young adolescent females and attempted to clarify inconsistent results (Dunn & Ondercin, 1981; Hatsukami, Mitchell, & Eckert, 1981; Katzman, Wolchik, & Braver, 1984; Norman & Herzog, 1983; Rost, Neuhaus, & Florin, 1982; Williamson, Kelly, Davis, Ruggiero, & Blouin, 1985). Second, it was one of the first studies to address the relationship between self-concept and eating disordered symptoms in young adolescent females. Third, it extended

previous research in this field to a younger range of females who are developing the symptoms of eating disorders. Fourth, it provided information for possible earlier identification of those adolescent females who are at risk for developing eating disordered symptoms.

Purpose and Objectives

The purpose of the study was to examine the relationship between self-concept, sex-role identity and weight-consciousness in young adolescent females. The specific objectives are listed below:

1. To determine if self-concept in young adolescent females is related to their levels of concern about weight-consciousness.
2. To determine if feminine psychological identity in young adolescent females is related to their levels of concern about weight-consciousness.
3. To determine if masculine psychological identity in young adolescent females is related to levels of concern about weight-consciousness.
4. To determine if androgynous psychological identity in young adolescent females is related to levels of concern about weight-consciousness.

Rationale

Historically, self-concept has been one of the major methods by which researchers have attempted to understand the period of adolescence (Ellis & Davis, 1982). One reason for this focus on self-concept is that at about the age of 11 the self-concept is thought to begin reorganization resulting in the development of new emotional patterns (Ellis & Davis, 1982). During this period the young adolescent is more self-conscious and has a less stable self-image than in later adolescence (Chiam, 1987).

Results of a study by Grant and Fodor (1986) indicated that lowered self-concept was a major factor in the prediction of eating disorders in adolescents aged 15 to 18. Their results concur with research conducted by Bruch (1978), Lerner, Orlos, and Knapp (1976), and Mallick, Whipple and Huerta (1987).

Another dimension that was investigated in this study is that of psychological sex-role identity. According to Lamke (1982), sex-role orientation is related to self-concept in early adolescence. Her research has shown that identification with masculine psychological traits is related to high levels of self-concept in females aged 12 to 15. Rust and McCraw (1984) replicated this finding with

adolescents aged 14 to 18, but also concluded that an androgynous identity (a balance of male and female personality traits) was associated with high self-esteem. These findings concur with the Lerner, Sorrell, & Brackney (1981) theory that effective functioning (defined as high self-concept) in our society requires both masculinity and femininity, with a greater emphasis on masculinity than on femininity (Lamke, 1982).

Based on these data, it could be hypothesized that young adolescent females who more strongly identify with the feminine sex-role orientation will have lower self-concept because of the lower value society places on feminine traits. As stated by Striegel-Moore, et al. (1986), for adolescent females being thin is important because thinness figures prominently in the traditional view of female attractiveness. Also, the societal message received by these females about the desirability of thinness interacts with a vulnerability to the personal opinions of others (as evidenced by low self-concept) and results in excessive concern about pubertal increases in body fat. The dilemma for these females is that during a period when self-concept is undergoing reorganization, the drive for thinness is internalized as an enhancing attribute. However, during this time period the average

body weight for females and the proportion of fat to lean tissue increases (Beller, 1977; Tanner, 1978), while the beauty ideal for females moves toward an increasingly thinner standard. Thus the quest for the ideal thin frame becomes a means of enhancing one's self-value, but the physiological changes in the young adolescent female's body make this drive for thinness a difficult venture.

The present study focused on the following variables: (a) self-concept, (b) sex-role identity, and (c) weight-consciousness. The null hypothesis was as follows:

Hypotheses

Null hypothesis: A significant amount of variance in weight-consciousness in young adolescent females cannot be accounted for using a linear combination of the variables of self-concept and sex-role identity.

The present study also focused on the following research hypotheses:

Hypothesis one: Self-concept is related to weight-consciousness in young adolescent females.

Hypothesis two: Feminine sex-role identity

is related to weight-consciousness in young adolescent females.

Hypothesis three: Masculine sex-role identity is related to weight-consciousness in young adolescent females.

Hypothesis four: Androgynous sex-role identity is related to weight-consciousness in young adolescent females.

Definition of Terms

Adolescence is the age when initial internal pubertal changes begin. Historically, the period of adolescence has been defined as ages 13 through 18 years of age. Since females reach puberty at an earlier age, adolescence can be defined as beginning earlier for females than for males.

Eating disorders describe patterns of disturbed eating behavior. Two primary disorders are anorexia nervosa and bulimia. Anorexia nervosa is a type of eating disorder which is characterized by loss of at least 25% of original body weight, preoccupation with food, fear of fat, distortion of body image, reduced sexual activity, amenorrhea, and hyperactivity. Bulimia is characterized by binge eating, induced vomiting or purging, preoccupation

with food, and fear of weight gain.

Psychological androgyny, according to Bem's (1974) balance model, is a state or process in which an individual's masculine and feminine tendencies are relatively balanced. Androgyny is assessed through responses to cultural definitions of idealized standards of femininity and masculinity which evaluate an individual's personality and behavior.

Self-concept is a relatively stable set of self-attitudes (Rogers, 1951). It is viewed as originating in infancy and evolving slowly into a complex awareness of the self (Ellis & Davis, 1982). These self-attitudes are not only descriptive but also evaluative and are measured by examining characteristics children say they like and dislike about themselves. For the purposes of this study, self-concept was measured by the Piers-Harris Self-Concept Scale (Piers & Harris, 1964) which was developed for use with children in grades four through 12. The 80 items on the scale are evaluative statements to which children may respond by circling "yes" if the statement applies to him or her, or "no" if it does not. The obtained raw scores can then be converted to an overall self-concept score. Thus, a high total raw score indicates a high self-concept, whereas lower scores are associated with lower

self-concept.

Sex-role identity is the degree to which individuals view themselves as masculine or feminine. It is measured by responses to cultural definitions of idealized standards of femininity and masculinity which evaluate an individual's personality and behavior. In this study, sex-role identity was measured by the Adolescent Sex Role Inventory (ASRI) (Thomas & Robinson, 1981b).

Weight-consciousness is an ardent wish to lose weight and a fear of weight gain. In this study, weight-consciousness was measured by scores on the Drive for Thinness Scale of the Eating Disorders Inventory (EDI), (Garner & Olmsted, 1984).

Young adolescence was defined as ages 12 through 14 years.

Limitations of the Study

The first limitation of this study related to the voluntary nature of the participation of the subjects and the necessity of requiring parental permission for those subjects to participate. Thus, the subject pool was not selected by random sampling which could have controlled for variances among the participating subjects. It was necessary to rely on the adolescents to present the

permission form to their parents and return it signed by them. This procedure eliminated some participants who either forgot the form or whose parents would not sign it. It was not possible to determine the effect that this method of subject selection had on the outcome of the study.

A second limitation was that the instruments required self-report, thus assuming that subjects responded accurately and honestly. Although anonymity of participants was assured through a number-coding system, the necessity of relying on the respondents' accuracy and honesty is of particular concern because of the topic of the research. It has been previously established that subjects who possess traits of eating disorders often display significant denial. Thus, those adolescents who participated and who may have been experiencing eating-disordered symptoms may not have responded accurately. Also, since the instruments were administered in standardized form, the researcher was not able to give assistance to the participants other than the directions allowed. Thus, difficulties with comprehension of the terms utilized in the test items could have attributed to the responses of the subjects.

A third limitation was also related to the issue of

instrumentation. The BSRI has had limited use with populations younger than 18 years of age. The ASRI was developed for subjects ages 10 to 14 as a downward extension of the BSRI. Preliminary analyses indicate that the adolescent version is valid to the extent that the BSRI is valid (Thomas & Robinson, 1981b). However, the ASRI has not been as extensively researched as its predecessor.

A fourth limitation was related to the generalizability of the findings of the study. The subject pool was 12 to 14 year old females who were Caucasian (38.7%), Native American (32.3%), and Hispanic (23.7%). As a result, the findings should be cautiously evaluated.

CHAPTER II

REVIEW OF THE LITERATURE

A focus of this study was the development of weight-consciousness in young adolescent females and how this process is related to self-concept and sex-role identity. A brief analysis of the research regarding the prevalence of weight-consciousness in the normal female population will be presented and will follow with a discussion of factors related to self-concept issues and sex-role identity. An additional section will investigate the possible influence that these variables have in the development of eating-disordered symptoms in females.

Weight-Consciousness Research

Mazur (1986) attempted to explain the phenomenon of dietary abuse so common among young women of this decade. He attributed the abuse in part to the changing cultural image of the beautiful woman, and specifically, the emphasis on a slender body. An important fact that Mazur emphasized is that many "normal" women, that is, women who are not diagnosed as anorexics, subject themselves to

extreme diet and exercise regimens.

Rodin, Silberstein, and Striegel-Moore (1985) in a study of college-age women, reported that weight concerns and dieting were rampant in this non-clinical population. They referred to weight-consciousness attitudes and behaviors as normative.

Studies involving the adolescent population have reported similar findings. Hendren, Barber, and Sigafos (1985) investigated the prevalence of eating disordered behavior in adolescent females aged 12 to 18 years. Using a questionnaire developed with items from the Eating Attitudes Test and the Eating Disorders Inventory, the researchers noted that an overall 18.35% of the females reported eating-disordered symptoms such as overconcern with food, body weight, and weight-control. In addition to the prevalence of symptoms across all ages in this study, the early onset of such symptoms should be particularly noted. The researchers stated that eating-disordered symptoms were especially prevalent in the 12- and 13-year-old females. In this age group, 31% of the 12-year-olds and 17.7% of the 13-year-olds attending a private day school reported such symptoms.

Polivy and Herman (1987) reported that many normal eaters have symptoms of eating-disorder pathologies. They

cited additional studies which have concluded that among young women and adolescent girls, dieting was more prevalent than not dieting, and was thus normative behavior (Polivy, Garner, & Garfinkel, 1986; Polivy & Herman, 1987; Rodin, et al., 1985). A predominant characteristic found in females who were clinically diagnosed as eating disordered and in those who were considered normal dieters was a strong preoccupation with body weight.

Why do so many females become preoccupied with body weight? By examining the development of the self-concept structure, the importance of body image in this process can be noted.

Self-Concept Structure

Research in the area of self-concept in adolescents has focused on the organization of the self-system and its change and stability during this time period. Ellis and Davis (1982) described the period of adolescence as a time when self-concept begins to expand and transcend previous boundaries. The adolescent becomes more aware of the self, but also of the world. He or she is more reactive to social values and standards, while at the same time attempting to accept the self as a being of worth. Ellis and Davis (1982) state that the changing

moods and emotions adolescents experience are evidence of the changing of the structure of the self. However, they do not discuss how the structure of the self-concept may vary for males and females or if females may be more strongly influenced by social factors.

Other studies with adolescents have attempted to analyze the stability of self-concept during adolescent growth (Kokenes, 1974; McCarthy & Hoge, 1982; Montemayor & Eisen, 1977; O'Malley & Bachman, 1983). Kokenes' study investigated the validity of the Coopersmith Self-Esteem Inventory with 7,600 public school children in grades four through eight. It was noted that sixth graders expressed more rejecting self-attitudes than children in other grade levels. This variance was attributed to physiological changes the children were beginning to experience. Thus, this study adds evidence to the position taken that self-attitudes in adolescents are changeable and are affected by physiological factors. Interestingly, the study did not investigate the possibility of differential effects among males and females.

Montemayor and Eisen (1977) studied the changes in self-concept from childhood to adolescence (ages 9 to 18) by asking the subjects to respond to the question "Who am I?". They noted a significant difference in the process by

which children and adolescents define their self-identity. The hypothesis that self-concept becomes more abstract with increasing age was supported. However, analysis of data did not show significant differences in change of self-concept between males and females. An additional aspect of this study was the relationship of the physical self to self-conceptions. It was noted that 87% of the 10 year olds, 57% of the 12 year olds and 46% of the 14 year olds made statements attributed to their physical self or body image. However, no analysis was reported as to the positive or negative nature of these statements or how these directional differences may relate to self-concept.

O'Malley and Bachman (1983) conducted research on the stability of self-concept in adolescence. They found a relationship between the stability of self-concept with that of external factors. Although they acknowledge the effects of external factors on self-concept, they state that it is difficult to assess the impact that these variables have. They address the difficulty in setting clear boundaries of where external variables leave off and self-concept begins. The above studies point to adolescent development as a period of changing self-structure. It was also noted that adolescent self-concept is vulnerable to external factors such as social values and physiological

changes. The following studies address these issues in more detail and focus on the relationship of body image and self-concept.

Self-Concept and Body Image

Ellis, Gehman, and Katzenmeyer (1980) studied 13-year-old adolescents and identified eight dimensions of self-concept: self-acceptance, self-security, social confidence, school affiliation, teacher affiliation, peer affiliation, family affiliation, and self-assertion. A dimension for physical appearance or body image specifically did not emerge; however, the authors state that physical appearance could be considered a factor in determining the adolescent's degree of self-acceptance. Thus, expressions of positive or negative self-acceptance could be related to feelings about physical appearance.

A study attempting to predict self-concept scores by selected academic and personal variables was conducted by Leonardson (1986). Using 165 male and female students in grades 9 to 12, positive correlations were found between physical health values and self-concept. However, physical health was assessed by the subjects' perceptions of their health, not by direct measures. Whether subjects may have associated physical health with body weight or body image

cannot be ascertained from this study. Also, differences in findings between male and female subjects were not addressed.

An extensive study was conducted with 30 adolescent anorexics to investigate the self-concept of this population (Swift, Bushnell, Hanson, & Logemann, 1986). A control group of 800 age-matched normal females was used and the comparative statistics analyzed. As expected, hospitalized anorexics scored very low on three scales from the Offer Self-Image Questionnaire used to assess the psychological self which includes impulse control, emotional tone, and body and self-image. These findings concur with a previous study by Casper, Offer, & Ostrov (1981). A limitation of this study is that the anorexic group was compared to normal adolescents rather than clinical control groups. Thus, it cannot be determined if the self-concept deficiencies are specific to the anorexia or to the effects of psychiatric hospitalization.

Stein (1987) attempted to add to the research in the area of the effects of body weight on self-concept. She conducted a study with nonobese and obese females who were ages 18 to 25. Her findings concur with previous studies in that obese subjects had lower self-concept than the nonobese. Using the Tennessee Self-Concept Scale, low

scores were obtained from the obese sample in the areas of physical self, family self, identity and self-satisfaction. However, the application of this study is restricted due to the homogeneity of subjects who were all nursing school students.

Another study examined psychological traits of weight-conscious adolescent females and included subjects who were anorexic or bulimic (Mallick, Whipple & Huerta, 1987). Comparisons were made with a group of females identified as normal adolescents. The athletic group was included because of the cited tendency of female athletes to have undiagnosed eating disorders. Results corroborated previous findings by Garner, Olmsted, and Garfinkel (1983) in that the eating-disordered group scored extremely low on the Body and Self-Image scale of the Offer Self-Image Questionnaire.

The above studies indicate that in both normal groups and eating-disordered groups, body image satisfaction and self-concept may be related. The societal value that physical attractiveness is a desirable trait is strongly communicated to adolescents. Since societal attitudes are internalized by adolescents as a basis of evaluating self-worth (Ellis & Davis, 1982), the nature of one's perceived body image becomes a facet of that person's total self-

concept. To feel good about the self, it appears that the adolescent must have a positive perception of body image.

Another factor related to self-concept is sex-role identity, or more specifically, the societal values placed on femininity and masculinity. Lawler (1988) stated that the experience of being born male or being born female in this culture is essentially different. Whether these differences are genetically or environmentally introduced has been long debated in our society. However, according to Lawler, the significant factor is that our society values what is male more than it values what is female.

Adolescent Sex-Role Identity

Studies concerning sex-role identity, and particularly the concept of psychological androgyny, entered research literature in the mid-1970's (Thomas & Robinson, 1981a). Interest in this field of research was in part due to the development of the Bem Sex Role Inventory which was designed to measure the psychological traits of femininity, masculinity, and the co-presence of these traits which was called androgyny (Bem 1974, 1975). The majority of this research was conducted with college students and older adults (Thomas & Robinson, 1981b), in part because of the

lack of suitable instruments for younger populations, but also because of controversy about the origins of the type of sexual identity defined as androgyny.

Children learn their biological sexual identity at an early age, and they also become aware of sex roles which differentiate males and females. For example, children are exposed by their parents to sex-typed toys and clothing from the time they are born. They later begin to notice differences in the roles males and females assume in their daily activities (Havighurst, 1983). Between the ages of three to seven years, a child realizes that people fall into one of two categories: boys or girls, mothers or fathers, men or women (Kagan, 1964).

Whether it is possible to develop in childhood or adolescence a sex-role identity which combines feminine and masculine traits has not been empirically established (Thomas & Robinson, 1981a). Perhaps as stated earlier, this is due to the lack of measurement devices appropriate to this age range, but it also may be due to the theoretical orientation which asserts that a higher level of cognitive development is necessary for the incorporation of both female and male traits (Hefner, Rebecca, & Oleshansky, 1975).

Pleck (1975) asserted that there is value in early

adolescent identification with same sex-roles. He correlated masculine and feminine development with moral development, and thus implied that androgyny may not be conducive to positive adjustment in early adolescence (Lamke, 1982). However, Lerner, Sorrell, and Brackney (1981) theorized that high levels of masculinity would be related to positive self-concept in early adolescence.

In 1981, Thomas and Robinson developed a downward extension of the Bem Sex Role Inventory (BSRI) which was designed for use with subjects ages 10 to 14. This instrument, the Adolescent Sex Role Inventory (ASRI) is said to be valid to the extent that the BSRI is valid and appears to measure similar constructs. The relevance of this instrument, according to Thomas and Robinson, is its application to the study of the sex-role socialization process in children. If, in fact, sex-role transcendence is a learned process and such identity results in healthier adaptations, then early identification may certainly have merit.

Attempting to clarify these concepts, Lamke (1982) studied the relationship of sex-role orientation on self-concept in early adolescence. Her subjects ranged in age from 12 to 15. Results indicated that the relationship of sex-role orientation and self-concept is very similar in

early adolescents to that found for older samples. In her study, masculinity was related to high levels of self-concept in both males and females. Similar results were obtained by Rust and McCraw (1984) with a slightly older population ranging in ages from 14 to 18 years.

Deutsch and Gilbert (1976) studied sex role concepts and their relationship to personal adjustment (as measured by the Revised Bell Adjustment Inventory). Their finding was that masculine identification was more adjustive than androgynous identification in males, but in females good adjustment was associated with androgyny. The authors noted considerable confusion in the female subjects related to their sex-roles and self-concepts. They hypothesized that in our society masculinity is healthy for both sexes, while femininity is unhealthy. The study was confined to college age subjects, thus restricting generalizability of results.

Another study examined effective behaviors as related to sex-role identity (Bem, 1975). Bem's assertion was that rigid male or female identification may restrict the range of behaviors available to one in responding to various situational changes. Again using college students, this study resulted in an affirmation of Bem's hypothesis that masculine and androgynous subjects remained more

independent from social pressure than feminine subjects.

Using an instrument developed by Spence, Helmreich, and Stapp (1974), the Personal Attributes Questionnaire, further validation of behavior adaptability of masculine and androgynous subjects was obtained in a 1979 study by Helmreich, Spence, and Holahan. These researchers found that androgynous and masculine subjects of both sexes had higher comfort ratings than did feminine and undifferentiated subjects when performing tasks that were defined as neutral, masculine or feminine. It was speculated that these differences resulted because androgynous and masculine subjects possessed higher self-concept resulting in increased self-confidence in performing unfamiliar tasks.

Spence, Helmreich, and Stapp (1975) correlated measures of social self-concept and sex-role stereotype. Using the Personal Attributes Questionnaire with college students, it was found that subjects classified as androgynous had highest scores on a self-concept measure, followed by those high in masculinity and low in femininity. Androgynous individuals also reported greater academic success, more social experience with the opposite sex, and lower incidence of childhood illness.

Flaherty and Dusek (1980) continued the research on

androgyny and self-concept, and attempted to clarify whether the higher levels of self-concept in androgynous individuals was due to high levels of masculinity and femininity or only to high levels of masculinity. Again using college-age subjects and defining self-esteem by four categories (adjustment, achievement/leadership, congeniality/sociability, and masculinity/femininity), results indicated that androgynous subjects scored significantly higher than undifferentiated subjects. Using multiple regression analysis, it was noted that femininity was not a significant variable, thus the authors assert that greater adjustment is a function of androgyny in females only.

The aspect of sex-role identity and the possible emergence of psychological androgyny in young adolescents has not been extensively researched. In fact, there are differences of opinion as to whether strong same-sex identity is healthier than that of androgynous identity. Also, there have been conflicting results as to whether masculine identity or androgynous identity more strongly correlate with high self-concept.

Alpert-Gillis and Connell (1989) attempted to clarify the issue of whether sex-role identity contributes to children's self-concept. They administered the Perceived

Competence Scale for Children, the Multidimensional Measure of Children's Perceptions of Control, and the Children's Personal Attributes Questionnaire to 119 eight to twelve year old males and females. A major finding of this study was that the children's general self-concept was significantly positively related to masculine and androgynous sex-role identity. When controlling for biological gender, these researchers found that general self-concept was marginally related to biological gender, with boys showing a slight advantage.

Another factor that has received little investigation is that of the influence of sex-role identity on the development of eating disorders. If, as previously reported, females who highly identify with feminine traits are more prone to have lower self-concept, then it can be speculated that these females are more vulnerable to societal pressure to conform to standards of desirable body weight. Alternatively, females who identify with masculine traits may display qualities of personality highly valued by society and thus develop stronger self-concepts. They are less likely to experience the need to conform to societal pressures to be thin.

A study by Jackson, Sullivan and Rostker (1988) attempted to examine the relationship between gender role

and body image. The rationale for this study was that the relationship between gender role and self-concept and the relationship between body image and self-concept suggest a relationship between gender role and body image. Subjects for this study were 166 college undergraduates. Results indicated that females who identified with feminine sex-role identity evaluated their physical appearance less favorably than androgynous females and masculine females. In attempting to predict a linear relationship of body-image ratings, self-concept, although an important predictor, did not account for the relationship between gender, gender role and body image.

Although sex-role identity has not been studied widely as a factor in the development of eating disorders, a number of studies have attempted to identify other risk factors and personality variables.

Eating Disorders Research

The vast majority of eating disorders studies have been done with college age and high school age females (Mitchell & Eckert, 1987). They have focused on risk factors in the following categories: demographic characteristics, personality, family dynamics and

sociocultural influences (Shisslak, Crago, Neal, & Swain, 1987).

Various statistics have been cited in referring to the prevalence of eating disorders in this country. A two-fold increase in eating disorders between the decade of the 1960's and the years 1970-76 was reported from a study in Monroe County, New York (Mitchell & Eckert, 1987). A study in 1981 reported that 13% of college women evidenced symptoms of binge-eating and purging. The American Psychiatric Association reported in 1980 that approximately one in 250 females between the ages of 12 and 18 was anorexic (cited in Shisslak, et al., 1987). More recent statistics cite the alarming increase of these numbers and predict the spread of the disorder to even more groups within the normal population (Mitchell & Eckert, 1987).

The fact that eating disorders are overwhelmingly associated with the female population has been well-documented (Kagan & Squires, 1984; Mazur, 1986; Mitchell & Eckert, 1987; Shisslak, et al., 1987; Striegel-Moore, et al., 1986). Females appear to be susceptible to societal pressures to conform and thus respond by excessive dieting and weight concerns to the societal value of thinness. As long as the standard of thinness as an important aspect of attractiveness remains, many females will overadapt to

achieve unrealistic body proportions (Mazur, 1986).

Personality traits of eating-disordered females have been studied by researchers attempting to determine variables which might lead to earlier identification and treatment. The most significant affective variable that Kagan and Squires (1984) found in the eating-disordered population was a feeling of failure in meeting one's own and other's expectations. These authors indicated a possible connection between such feelings of inadequacy and the emotional patterns of eating common to females affected by eating disorders.

Muuss (1986) found that bulimia was more prevalent in females who were high achievers, overly concerned about how others perceive them, and preoccupied with appearance and body image. It was hypothesized that these females have low self-esteem which prevents them from developing intimate relationships with others. This study (Muuss, 1986) corroborates findings by Strober (1980) that a relevant feature of anorexia nervosa is the existence of interpersonal anxieties.

Hendren, et al. (1985) attempted to compare adolescent females who had symptoms of eating disorders with women who did not report such symptoms. Using a questionnaire that included personal variables such as family background and

using items from the Eating Disorders Inventory, the following results were obtained. Younger students (ages 13 to 14) had a lower incidence of eating disordered symptoms than older groups, however, 18% of this younger group did report such symptoms. This was considered by the authors of the study to be a notable finding. However, it is important to note that the population surveyed included students in private schools who were from upper middle-class income families.

The above study also points to a relevant factor in the study of eating disorders. It appears that eating disorder symptoms may exist on a continuum with less severe symptoms existing in populations who have not been identified as eating disordered.

Grant and Fodor (1986) attempted to replicate previous findings of Lerner, et al. (1976) and Bruch (1973, 1978) linking self-concept and perceptions of physical attractiveness with eating disorders in adolescents. In this study the Eating Disorders Inventory (Garner, Olmsted & Polivy, 1983) was used to identify eating disturbance in a population of undiagnosed high school students. Results indicated that self-esteem was the most important predictor of tendencies toward disturbed eating patterns.

Also attempting to identify factors related to eating

disorders, a study by Eisele, Hertsgaard, and Light (1986) used females who were 12 to 14 years of age. Data was collected from five subscales from the Eating Disorders Inventory (drive for thinness, bulimia, body dissatisfaction, perfectionism, and maturity fears) and a biographical data sheet. Results indicated that the older subjects (14-year-olds) scored highest on drive for thinness and body satisfaction subscales. Those girls who scored highest on the perfectionism scale had the highest academic grade point averages.

An interesting finding of this study was that girls who were not from families with both biological parents present scored significantly higher on the drive for thinness subscale. Another demographic variable, father's occupation, also appeared to be significant. The authors state that girls with fathers with professional occupations scored lower on the maturity fears subscale than girls whose fathers were nonprofessionals.

Summary

Adolescence is a period during which body image and physical attractiveness influence the developing structure of the self-concept. Thus, as shown in previous studies,

adolescents who do not perceive their bodies to fit the societal model of thinness are subject to internalizing devalued perceptions of the self. Because these body weight norms are more strictly applied to females than to males, females are more likely to be affected by these factors.

Females are also influenced more highly by interpersonal reactions than males in the development of healthy self-concept. Thus, others' perceptions of their physical attractiveness becomes an important aspect of how females view themselves. When messages from media constantly reinforce society's value of thinness and the negative nature of obesity, females are more likely to develop a fear of gaining weight or an overconcern with body size.

The fact that younger populations of females are becoming weight conscious has not been thoroughly investigated. Although it has been documented that the period of childhood is becoming a much shorter time and that there exists societal pressure to advance into the world of adulthood at a more accelerated pace (Elkind, 1984), there has been little research to investigate the earlier onset of eating disorders in the young adolescent population.

It is unclear as to the impact that sex-role identity may have on the development of eating disorders in young adolescent females. It does appear that masculine traits are more highly valued by society and that identification with these traits may lead to healthier functioning. However, few studies have examined sex-role identity in young adolescents. Thus, by applying measures of sex-role identification to a younger population, more data on the emergence of these sex-role characteristics and their possible effect on self-esteem and the propensity to develop eating disorders were obtained.

CHAPTER III

METHOD

Chapter III presents the methods and procedures of the study. The chapter is divided into subsections which provide descriptive information about the subjects, instruments used, methods for implementing the study and the type of statistical analysis used to interpret the data.

Description of the Subjects

To determine the appropriate sample size, a power analysis was computed for four independent variables using an alpha level of .05, an effect size of .20, and desired power of .80 (Cohen & Cohen, 1983). The required sample size was determined to be 92.

The subjects were females aged 12 to 14 years who reside in two rural school districts located in the southwestern part of the United States.

Participation in the study was voluntary, and parental consent was obtained for all subjects. The school staff distributed explanatory letters and parental consent forms to all females who met the age requirements for this study

(12 to 14). A total of 93 students returned the consent form. Of these 93 students, 44 (47.3%) were age 12, 24 (25.8%) were age 13, and 21 (22.5%) were age 14. The remaining four students (4.3%) did not report their current age. Regarding grade placement, 44 (47.3%) of the students were in the 6th grade, 19 (20.4%) were 7th-graders, 23 (24.7%) were 8th-graders, 3 (3.2%) were in the 9th grade, and 4 (4.3%) did not report their grade placement.

Ethnic identification of the participating students was as follows: Caucasian, 38.7%; Native American, 32.3%; Hispanic, 23.7%, Unreported, 4.3%; and Other, 1.1%.

Parents were asked to report their daughters' approximate academic level of achievement as represented by their grades in school. The results are presented in Table 1. Approximately one-half of the students (55.9%) were reported by their parents as receiving grades in the "A" and "A and B" range.

Table 1

Academic Achievement of Subjects as Reported by Parents

Grades	Frequency	Percent
All A's	11	11.8
A's & B's	41	44.1
A's, B's, & C's	27	29.0
B's and C's	5	5.4
B's, C's & D's	5	5.4
Unreported	4	4.3
	—	—
TOTAL	93	100.0

Parents were also asked to describe their daughter's present body weight in terms of average, above average or below average. Although approximately one-half (62.4%) of the students were reported by their parents to be of average weight, about one-fourth (26.9%) of the students were reported to be above average in body weight. These data are presented in Table 2.

Table 2

Body Weight of Subjects as Reported by Parents

	Frequency	Percent
Average	58	62.4
Above average	25	26.9
Below average	6	6.5
Unreported	4	4.3
	-----	-----
TOTAL	93	100.0

A report of current marital status was obtained from participants' parents. The frequency and percentages of respondents who were classified as married, separated, divorced, or never married are presented in Table 3. Approximately two-thirds (66.7%) of the respondents reported their current status as married.

Table 3

Marital Status of Parents

	Frequency	Percentage
Married	62	66.7
Separated	5	5.4
Divorced	18	19.4
Never Married	3	3.2
Unreported	5	5.4
	—	—
TOTAL	93	100.0

Parents also were asked to state their highest attained educational levels. The questionnaire requested that this information be listed for both the mother and the father of the participants in the study. Highest attained educational levels of the mothers is reported in Table 4, and the same information for the fathers is reported in Table 5. Approximately three-fourths (75.4%) of the mothers and three-fourths (75.4%) of the fathers were high school graduates.

Table 4

Mothers' Educational Levels

	Frequency	Percentage
0 - 11th grade	15	16.1
High school graduate	30	32.3
Some college credits	25	26.9
College graduate	14	15.1
Master's Degree	1	1.1
Unreported	8	8.6
	93	100.0

Table 5

Fathers' Educational Levels

	Frequency	Percentage
0 - 11th grade	15	16.1
High school graduate	28	30.1
Some college credits	22	23.7
College graduate	16	17.2
Master's Degree	2	2.2
Above Master's	2	2.2
Unreported	8	8.6
	93	100.0

Also requested from participants' parents was the estimated amount of annual family income. This information is presented in Table 6. When compared to the other demographic questions, a larger number of respondents chose not to report this information (14%). Approximately one-half (56%) of the families reported income below \$25,000 per year, with the remaining 44% reporting income above that level.

Table 6

Annual Family Income as Reported by Subjects' Parents

	Frequency	Percentage
0 - \$9,0000	9	9.7
\$10,000 - \$14,000	13	14.0
\$15,000 - \$19,000	14	15.1
\$20,000 - \$24,000	16	17.2
\$25,000 - \$29,000	10	10.8
\$30,000 - \$34,000	1	1.1
\$35,000 - Above	17	18.3
Unreported	13	14.0
	—	—
TOTAL	93	100.0

Instrumentation

Demographic questionnaire

A questionnaire eliciting demographic information from each subject was developed (see Appendix A). Items included on this form were derived from studies which assessed factors that appear to be related to the development of eating disorders. These factors are socioeconomic status as determined by family income and educational level of parents, marital status of parents and academic achievement of the subject (Eisele, Hertzgaard & Light, 1986). Ethnic background and age of subject were also requested on the form. Subjects' parents were presented with this questionnaire, a brief description of the purpose of the study (see Appendix B), and a parent consent form (see Appendix C). The consent form was completed by parents and returned to school personnel.

Piers-Harris Self-Concept Scale

The Piers-Harris Self-Concept Scale (Piers & Harris, 1964) was used to measure the self-concept of each subject. The Piers-Harris is a widely-used measure of self-concept developed for use with children in grades four through 12. It consists of 80 items which can be administered

individually or in a group. The items are first person, declarative statements which subjects were instructed to answer by circling "Yes" if the statement describes the way she feels about herself, or "No" if the statement does not describe the way she feels about herself. Some examples of the items include: "I am well behaved in school." "I am slow in finishing my school work." " My looks bother me," "I give up easily." " I have many friends." and "I wish I were different."

The Piers-Harris was normed on 1,183 children in grades 4 through twelve. A restriction of generalizability relates to the norming sample which consisted of students from one school district in Pennsylvania.

Reliability. Reliability studies have assessed test-retest reliability ranging from .42 to .96, with a mean of .73. Internal consistency studies have yielded coefficients from .89 to .93. Thus the instrument does appear to have satisfactory stability and consistency data.

Validity. Validity studies have compared the Piers-Harris with other measures of self-concept. The highest correlation (.85) was reported for the Coopersmith

Self-Esteem Inventory, which closely resembles the Piers-Harris in format and age range. The Piers-Harris is considered to be a psychometrically adequate instrument whose usefulness in research has been documented (Epstein, 1985).

Adolescent Sex-Role Inventory

The Adolescent Sex-Role Inventory (ASRI) (Thomas & Robinson, 1981b) was developed as a downward extension of the Bem Sex Role Inventory (BSRI) (Bem, 1981). The BSRI was normed upon a 1973 sample of 279 females and 444 males and a 1978 sample of 340 females and 476 males. Subjects in the samples have ranged from Stanford University undergraduates, non-Stanford undergraduates, psychiatric inpatients, and several groups of individuals in age ranges not consistent with the typical undergraduate student.

Validity. A large number of studies have shown validity of the BSRI femininity and/or masculinity scales with gender-related behaviors (Gaudreau, 1977; Moreland, Gulanick, Montague, and Harren, 1978; Pedhauzer & Tetenbaum, 1979; Waters, Waters, and Pincus, 1977).

Reliability. The BSRI also has displayed good internal consistency and test-retest reliability. The

following coefficient alphas were reported: for females, .75 for the Femininity scale and .87 for the Masculinity scale; for males, .78 for the Femininity scale and .87 for the Masculinity scale.

The ASRI authors state that the use of the BSRI with children had not been satisfactory because of its higher reading level. Since children did not understand the stimulus words of the BSRI, they tended to respond randomly (Thomas & Robinson, 1981b). Synonyms for those stimulus words were developed by a group of undergraduate child development majors. The ASRI and the BSRI were then administered to undergraduate students. ASRI terms were then modified to eliminate discrepancies in response patterns. The revised ASRI was next administered to samples which included seventh and eighth graders, undergraduate and graduate students. A principal axis factor analysis with a varimax rotation for both the ASRI and BSRI indicated that both factor structures were highly similar.

In a further attempt to compare the ASRI and BSRI, correlations between these two scales and personality measures were computed. The patterns of correlations were highly similar.

The ASRI was designed for use with populations aged 10

to 14 years and includes 60 self-rating items. Subjects were asked to rate themselves on 20 stereotypically feminine traits, on 20 stereotypically masculine traits, and on 20 filler items. Some examples of the stimulus words or phrases include: "Stand up for your ideas," "Moods go up and down," "Good in sports," and "Easy to get along with." Scores were derived for the Femininity and Masculinity scales by adding and averaging the total points for all 20 items in the respective scales. Androgyny scores were derived through the use of a multiplicative Masculinity \times Femininity term.

Eating Disorders Inventory

The Eating Disorders Inventory (EDI) (Garner, Olmsted, and Polivy, 1983) is a 64-item, 6-point forced-choice inventory which assesses behavioral and psychological traits common in eating disorders. It has also been designed to be a screening device to indicate which individuals are weight preoccupied (Garner, et al., 1983). It consists of eight subscales: Drive for Thinness, Bulimia, Body Satisfaction, Ineffectiveness, Perfectionism, Interpersonal Distrust, Interoceptive Awareness and Maturity Fears.

Validity. Criterion related validity studies have

yielded interater correlations ranging from .43 to .68. These studies compared EDI patient profiles with judgments of clinicians familiar with the patient's case history.

Reliability. Estimates of reliability of the EDI were calculated using responses of 271 college women. The reliability coefficients range from .72 to .93. The reliability coefficients (Standardized Cronbach's Alphas) for the Drive for Thinness Scale are .86 for the anorexic samples and .87 for the female college student samples.

Procedures

During the spring semester of 1989, the researcher met with the administration and faculty of the participating schools to explain the purpose and procedure of the study. The school officials identified the grade levels in which the targeted age ranges (12 to 14) would be located. These grade levels were 6th through 9th grade. The researcher was given permission by the schools to meet with the females in these grades and to discuss the purpose of the study. The demographic questionnaire (Appendix A), the brief description of the purpose of the study (Appendix B), and the parent consent form (Appendix C) were distributed to the students. They were requested to return the signed permission sheet and the completed demographic form to a

designated teacher. The demographic forms and the test protocols were number coded to ensure confidentiality of the participants. Those students who returned the signed parental permission form were sent by their teachers to a designated classroom for the testing procedures.

The Piers-Harris Self-Concept Scale was administered by the researcher to the students during the students' regular school hours. The standardized instructions were read aloud to the students, and they were given the opportunity to ask questions. The students were asked to "answer the terms as you really feel you are, not as you think you ought to be." To ensure accurate comprehension of each item, the researcher read the items aloud to the students and gave them time to mark their answer sheets before proceeding further. The test was completed by all participants in approximately 20 minutes.

The Adolescent Sex-Role Inventory (ASRI) was also administered by the researcher to all subjects during the students' regular school hours. The standardized test instructions were read to the participants, and the sample item was used to demonstrate the method of responding. The items were again read aloud to the participants, and progression to the next item did not occur until all participants were ready. The test was completed by the

participants in approximately 20 minutes.

The Eating Disorders Inventory (EDI) was also administered to each subject during regular school hours. The standardized instructions were read aloud to the subjects. Again the test items were also read aloud to ensure that each item was understood by the subjects. Each item was rated by the subjects as to how it applied to them on a six-point scale ranging from always to never. They were instructed to complete the entire instrument without skipping any items. The completion of the test instrument required approximately 20 minutes.

Statistical Analysis

The resulting data were subjected to analysis using the multiple regression technique, a statistical technique that can be used to analyze the relationship between a single dependent (criterion) variable and one or several independent (predictor) variables. The predictor variables for this study were measured using self-concept scores and the two scores from the ASRI which indicate sex-role identification, along with a calculated measure of androgyny. The scores from the ASRI include a score for masculinity, a score for femininity, and a multiplicative score (masculinity x femininity) as a measure of androgyny.

This approach has achieved recognition from several authors because of its ability to utilize continuous variables rather than categorical variables and its use of an interactive, rather than an additive, approach to assessing androgyny (Harrington & Anderson, 1981; Lubrinski, Tellegren & Butcher, 1983). The criterion variable in the multiple regression analysis was the score on the Drive for Thinness Scale of the Eating Disorders Inventory.

Summary

Ninety-three females aged 12 to 14 participated in the study. Participation was voluntary, and parental consent was obtained for all subjects. Demographic information was obtained through the use of a questionnaire which was completed by the subjects' parents.

The Piers-Harris Self-Concept Scale, the Adolescent Sex Role Inventory Scale, and the Eating Disorders Inventory were administered to all subjects during their regular school hours. Multiple regression analysis was used to analyze the resulting data. Self-concept scores and masculine, feminine, and androgyny scores were used as independent variables in the regression equation. The dependent variable was the Drive for Thinness Score on the Eating Disorders Inventory.

CHAPTER IV

RESULTS

The purpose of this study was to examine the relationship between self-concept, sex-role identity and weight-consciousness in young adolescent females. This chapter provides the results of the statistical analysis of the data.

Preliminary Analysis

Tests of statistical assumptions

Before interpreting the results of the statistical analysis, the data were first examined to determine if the underlying assumptions of multiple regression had been met. The assumptions examined included normality, linearity, and homoscedasticity of residuals.

An examination of the standardized residual plot produced by the SPSSX Regression program indicated that the distribution of errors of prediction were independently and normally distributed at all levels of the predicted dependent variable. Thus the assumption of normality was met by the data.

The scatterplot shape also indicated that there was linearity between the predicted dependent variable scores

and errors of prediction. Therefore, the assumption of linearity was also satisfied.

Homoscedasticity was the third assumption that was investigated using the SPSSX Regression program. Constancy of variance in the standard deviation of error of prediction at all levels of the dependent variable was evident from further examination of the scatterplot. Thus the underlying assumption of homoscedasticity was also met.

The use of multiple regression also required that several practical matters be considered. Among these were sample size, multicollinearity and singularity, and the existence of outliers in the data set.

The suggested minimum requirement of at least 15 subjects per predictor variable (Cohen & Cohen, 1983) has been a guideline in the use of multiple regression analysis. The present study had 93 subjects and 4 independent variables, and therefore had a satisfactory case-to-variable ratio of approximately 23 to 1.

The test for multicollinearity and singularity computed by the SPSSX statistical package is the Durbin-Watson Test. The results of the Durbin-Watson Test yielded a value of 2.11, and therefore indicated that the data set did not consist of highly intercorrelated variables.

Finally, the statistical analysis produced by the SPSSX Regression program included a standardized residual

output of existing outlier scores. None of the scores were identified as outliers, and thus all of the scores were retained in the original data set.

Primary Analysis

Null hypothesis:

A significant amount of variance in drive for thinness in young adolescent females cannot be accounted for using a linear combination of the variables of self-concept and sex-role identity.

A standard multiple regression analysis of drive for thinness was calculated using the SPSSX Regression program. Sex-role identity was operationalized in this study through the use of measures of masculinity, femininity, and androgyny. Table 7 contains the means and standard deviations for the dependent variable of drive for thinness and the independent variables of self-concept, masculine, feminine and androgyny.

Table 7

Means and Standard Deviations for Independent Variables
Self-Concept, Masculine, Feminine, and Androgyny and for
Dependent Variable, Drive for Thinness

	Mean	Standard Deviation
Self-Concept	58.613	11.337
Masculine	64.613	8.208
Feminine	69.484	6.804
Androgyny	4483.720	665.356
Drive for Thinness	6.452	5.480

Table 8 reports the correlation matrix calculated for self-concept, masculine, feminine, androgyny, and drive for thinness, the variables in the regression equation.

Table 8

Correlation Matrix for Self-Concept, Masculine,
Feminine, Androgyny and Drive for Thinness

N = 93

	Self Con	Masc	Fem	Andro	DT
Self Con	1.00	.31	.06	.30	-.36
Masc	.31**	1.00	-.10	.74	-.24
Fem	.06	-.10	1.00	.58	.14
Andro	.30**	.74**	.58**	1.00	-.10
DT	-.36**	-.24*	.14	-.10	1.00

** $p < .01$ * $p < .05$

Note. Self Con = Self Concept; Masc = Masculine; Fem =
Feminine; Andro = Androgyny; DT = Drive for Thinness

All of the independent variables were entered simultaneously into the regression equation. The resulting R value was significantly different from zero: $F(4,88) = 4.67736$, $p < .01$. Table 9 presents the results obtained in this analysis.

Table 9

Regression of Masculine, Feminine and Androgyny on Drive for Thinness

Multiple R	.41872	R Square Change	.17533
R Square	.17533	F Change	4.67736
Adj. R Square	.13785	Sig. F Change	.0018
Standard Error	5.08852		

The amount of variance in the dependent variable drive for thinness that could be accounted for using a linear combination of the variables of self-concept and sex-role identity was 17.5%. Because the R value was significantly different from zero, the null hypothesis was rejected.

An examination of the output produced by SPSSX Regression indicated that self-concept was the only independent variable that contributed significantly ($p = .0014$) to the prediction of drive for thinness scores when all of the independent variables were entered in the regression equation.

The squared semipartial correlations among predictors were examined to determine how much unique variance of each predictor was related to variance of

the dependent variable. These results are presented in Table 10. The variable self-concept had the largest partial correlation with drive for thinness. The squared semipartial correlation for the independent variable of self-concept was .10. Thus, self-concept contributed 10% in shared variability to the overall variance of drive for thinness.

Table 10

Semipartial Correlations Among Independent Variables

Variable	Beta	Semipartial Correlation	Significant T
Androgyny	.202906	.018901	.8456
Self-Concept	-.340398	-.318986	.0014
Feminine	.021168	.002936	.9759
Masculine	-.283180	-.032344	.6035

The present study also focused on four secondary research hypotheses. The first one was:

Self-concept is related to weight-consciousness in young adolescent females.

There was a significant correlation between self-concept and drive for thinness of $-.36$ ($p < .01$). Thus, the first research hypothesis was supported.

The second research hypothesis addressed in this study was:

Feminine sex-role identity is related to weight-consciousness in young adolescent females.

Feminine sex-role identity had a nonsignificant correlation with drive for thinness of $.14$. Thus the second research hypothesis was not supported.

The third research hypothesis addressed in this study was:

Masculine sex-role identity is related to weight-consciousness in young adolescent females.

The correlation between masculinity scores and drive for thinness was $-.24$, indicating masculinity and drive for thinness are negatively related. This correlation was significant ($p < .05$). Thus, the third research hypothesis was supported.

The fourth research hypothesis addressed in this study was:

Androgynous sex-role identity is related to weight-consciousness in young adolescent

females.

The correlation between androgyny scores and drive for thinness was $-.10$, indicating androgyny and drive for thinness are negatively related. However, this correlation was nonsignificant ($p > .05$). Thus, the fourth research hypothesis was not supported.

Summary

The primary null hypothesis for this study stated that a significant amount of variance in weight-consciousness in young adolescent females cannot be accounted for using a linear combination of the variables of self-concept and sex-role identity. Sex-role identity was operationalized in this study through the use of measures of masculinity, femininity, and androgyny. The results of the analysis result in rejection of this hypothesis. The amount of variance in the dependent variable, drive for thinness, that could be predicted using the independent variables of self-concept, masculinity, femininity and androgyny was 17.5%

A secondary focus of this study was addressed through one of four research hypotheses which stated that self-concept is related to drive for thinness in young adolescent females. Self-concept was significantly

correlated with drive for thinness scores. Thus, this hypothesis was supported.

The second, third and fourth research hypotheses stated that feminine, masculine, and androgynous sex-role identities are related to drive for thinness in young adolescent females. Of these variables, masculinity had the only significant correlation with drive for thinness scores. Thus, the hypothesis which stated this relationship was supported by the data.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

A goal of this study was to investigate the relationship of self-concept, sex-role identity and weight-consciousness in young adolescent females. The increasing incidence of eating disorders in this country and the concern of mental health professionals to identify factors contributing to these disorders was cited as a rationale for this study. The study was limited to females because it has been well-documented that societal body weight norms are more stringently applied to females than to males. The young adolescent age group was determined to be at increasingly greater risk for developing eating disordered symptoms due to societal pressure to advance into the world of adulthood at a more accelerated pace. In addition, a large preponderance of previous eating disorders research has been focused on the high school, college and young adult female population. Thus, females in the age range of 12 to 14 were selected as the young adolescent population to be utilized in the present study.

The factor of self-concept was investigated because of previous research that had determined that adolescence is a period of development during which body image and physical attractiveness influence the developing structure of the self-concept. Thus it was hypothesized that level of self-concept would affect the extent to which the societal model of thinness was internalized as a perception of the self. Sex-role identity also was investigated in this study. Previous studies have determined that masculine and androgynous identification were related to healthier functioning in the adult population. It was further hypothesized that masculine and androgynous identities provided more independence from social pressure than feminine identities. It has also been hypothesized by previous researchers that masculine traits are more valued by society, and thus the incorporation of these traits into the personality structure may result in internalization of higher esteem for oneself.

The first question examined in the present study was: Is weight-consciousness related to the level of self-concept in young adolescent females? Weight-consciousness was measured by scores on the Drive for Thinness Scale of the Eating Disorders Inventory. Self-concept was measured by the Piers-Harris Self-Concept Inventory.

The second question examined was: Is weight-consciousness related to sex-role identity in young adolescent females. The types of sex-role identity were feminine, masculine and androgyny, and they were measured by the Adolescent Sex Role Inventory Scale.

The third question examined was: Is weight-consciousness related to an interaction of self-concept and sex-role identity in young adolescent females?

To explore these issues, five hypotheses were generated. The null hypothesis stated that a significant amount of variance in weight-consciousness, as measured by the Drive for Thinness Scale, could not be accounted for by using a linear combination of the variables of self-concept and sex-role identity.

The first research hypothesis stated that self-concept is related to weight-consciousness in young adolescent females.

The second research hypothesis stated that feminine sex-role identity is related to weight-consciousness in young adolescent females.

The third research hypothesis stated that masculine sex-role identity is related to weight-consciousness in young adolescent females.

The fourth research hypothesis stated that androgynous

sex-role identity is related to weight-consciousness in young adolescent females.

This chapter presents a discussion of the findings and implications of the findings. In addition, recommendations for further research and implications for practice are also presented.

Conclusions

Null Hypothesis:

A significant amount of variance in drive for thinness in young adolescent females cannot be accounted for using a linear combination of the variables of self-concept and sex-role identity.

The results for the null hypothesis, which dealt with the relationship between self-concept, sex-role identity, and weight-consciousness, indicated that the amount of variance in the dependent variable, drive for thinness, that can be predicted from a linear combination of the variables of self-concept and sex-role identity was 17.5%. Since it was shown that a linear relationship exists, further investigation of the nature of the

relationship was necessary to identify which of the predictor variables contributed significantly to the relationship.

Self-concept was the only predictor variable that contributed significantly to drive for thinness scores. The amount of shared variability of the overall variance in drive for thinness that the variable self-concept contributed was 10%. Because of the small amount of this predicted variance, the question must be raised as to the practical significance of this finding. Another question to consider is what factors may contribute to the 90% of variance not accounted for by the variable self-concept?

It has been determined by previous research that the causes of eating-disordered symptoms are numerous and may be interrelated. The eating disorders of anorexia and bulimia, in particular, have been shown to be the result of many factors including achievement orientation, socioeconomic status, maturity fears, perfectionism, and family dynamics. Thus, the remaining 90% of variance in the independent variable drive for thinness in this study may be accounted for by a combination of the factors previously mentioned.

However, it does appear that the rationale for the study by Jackson, et al. (1988) was supported. This study

attempted to predict a relationship between gender role and body image based on previously shown relationships between gender role and self-concept and between body image and self-concept. Body image was operationalized by subjects' ratings of their physical appearance.

In the present study, it can be speculated that females who scored high on weight-consciousness might tend to be critical of their physical appearance and would thus rate it as low. However, it would appear that a major difference in the two studies focuses on the more general term "body image" as opposed to the more specific term "weight-consciousness." Body image could be assumed to incorporate other factors besides weight. Particularly for females, these factors could include body proportion and height.

It is also necessary to note that the Jackson, et al. study was done with college undergraduates, a population with a mean age of 21.4 years and an ethnic sample of 95% white.

First Research Hypothesis:

Self-concept is related to weight-consciousness in young adolescent females.

The results for the first research hypothesis which dealt with the relationship between self-concept and weight-consciousness, indicated that there was a significant negative relationship between these two variables (-.36). That is, as self-concept scores increased, weight-consciousness scores decreased.

The results of this study corroborate previous research with both normal and eating-disordered populations that assessed body image satisfaction and self-concept. These studies reported that self-concept and body image satisfaction had positive correlations. What is interesting is the young age of the participants in the present study and the extent to which their general well-being relates to a concern about body weight. It appears that those young adolescents who are more secure with their self-identities are not as likely to incorporate society's value of being thin.

Second Research Hypothesis:

Feminine sex-role identity is related to weight-consciousness in young adolescent females.

Third Research Hypothesis:

Masculine sex-role identity is related to weight-consciousness in young adolescent females.

Fourth Research Hypothesis:

Androgynous sex-role identity is related to weight-consciousness in young adolescent females.

The results for the second, third, and fourth research hypotheses which dealt with the relationship between sex-role identity and weight-consciousness indicated that masculinity was the only of these variables which had a significant correlation with drive for thinness scores. The relationship was negative (-.24) indicating that there was a tendency for drive for thinness to decrease as scores on the masculine scale increased. Androgyny also had a negative relationship with drive for thinness, but this correlation was small (-.10) and was nonsignificant. Femininity had a positive relationship with drive for thinness, but again, this relationship was nonsignificant (.14).

Results of the study by Jackson, et al. (1988)

indicated that females who identified with feminine sex-role identity evaluated their physical appearance less favorably than masculine and androgynous females. The population studied was college undergraduates. In the present investigation, physical appearance was not the dependent variable which was studied. However, in both studies, masculine identity was an indicator of positive acceptance of the bodily self as defined either by high ratings on physical appearance or low scores on extent of weight-consciousness.

As stated previously, androgynous sex-role identity was not significantly related to drive for thinness scores. One plausible rival hypothesis is that this type of sex-role identity is not firmly established in young adolescents. According to Thomas and Robinson (1981), the fact that an androgynous identity can be developed in childhood or adolescence has not been empirically established. It may be that the interaction of masculine and feminine identities which result in androgynous traits may not emerge or remain as stable in children and adolescents as in adults.

Feminine sex-role identity also did not have a significant correlation with drive for thinness. Another rival hypothesis is that in children,

same-sex identifications, i.e., feminine girls, have higher levels of functioning than other gender and sex-role combinations (Alpert-Gillis & Connell, 1989). According to this view, traditional sex-role identification may be more socially rewarding for children than alternative identifications.

In examining the scores on the drive for thinness scale, it was noted that the population studied had a mean score of 6.452 (SD = 5.480). Garner and Olmsted (1984), developers of the Eating Disorders Inventory, report a mean score of 5.1 (SD = 5.5) for female college students. No normative data was reported for girls ages 12 to 14. However, a study by Rosen, Silberg, and Gross (1988) attempted to collect EDI normative data on 1,373 high school boys and girls (grades 9 - 12). For the girls in this study, the mean score on the drive for thinness scale was 5.6 (SD = 5.9). An interesting finding was that significant sex, but not age, differences were obtained. The mean score for the boys was 1.7 (SD = 2.5) in the Rosen, Silberg and Gross study.

Two factors for discussion are noted from the Rosen, et al. study, from the EDI reported norms, and from the results of the present investigation. First, it appears from the examples cited that the young adolescent females

(ages 12 to 14) had the highest mean score on the weight-consciousness measure. The next highest mean score was obtained by the high school age group (grades 9 to 12), and the lowest mean score was obtained by the college age participants. There are large differences, however, in the sizes of the populations studied. This must, of course, be considered in formulating any hypotheses about the existence of a continuum of scores among various age groups from early adolescence to college age.

Secondly, it appears from the Rosen, et al. (1988) study that females do have a higher concern than males about body weight. As stated previously, there were significant differences between sex groups but not between age groups in the study. This finding supports the rationale of using female subjects only in the present investigation.

The results related to the hypotheses under investigation in this study must be viewed as tentative at this time. However, the directional quality of the scores of the variables may indicate that further research could be fruitful. The literature in this area is very limited and further investigations could be beneficial in adding to the data base on this topic.

Recommendations for Further Research

Because so little eating disorders research has been conducted with young adolescents, further studies are needed in this area. Most of the research has been done with college age females, but it appears that the pressure of society on females to be thin is extending downward to a much younger population. In the past, studies have been limited by the lack of instruments that are age-normed to this population. Those instruments that do exist, although purported to extend downward to age 12, often do not have satisfactory norms for that age group.

Further research should identify the age females become weight conscious and incorporate this concept into their self-system. Also, the possibility that weight-consciousness exists on a curvilinear basis with earlier and later years of development having less emphasis should be examined.

The majority of eating disorders research has used Caucasian females. Little data exists on other ethnic groups. It would be beneficial for future research to examine cross-cultural differences that may exist. For example, the question of whether some Native American groups who identify female weight gain as a sign of maturity also resist society's emphasis on thinness needs

to be investigated.

Finally, the effects of another factor that is unclear from this study and from previous studies is that of sex-role identity. Further research needs to assess and clarify which identity is more conducive to high levels of self-concept and thus to more adaptive functioning in society.

Implications for Counseling/Therapy Practice

It has been previously stated that eating disordered symptoms appear to exist on a continuum. That is, early mild or moderate symptoms may progress to more serious symptoms typical of the eating disorder diagnosis. Thus, early identification of such symptoms may result in more effective treatment.

As this study corroborated, levels of self-concept appear to be related to degree of weight-consciousness. Specifically, the inverse relationship established that low self-concept scores tended to predict high degree of weight-consciousness. For mental health practitioners this relationship could give a direction for prevention/intervention strategies. For example, female children or adolescents identified as having low self-concept issues could benefit from therapeutic strategies

that would implement discussion related to their body weight concept. Distorted perceptions of body size or weight could then be addressed.

In addition, although this study failed to show that sex-role identity was a significant predictor of weight-consciousness in young adolescent females, the directionality of the correlations of sex-role identity with weight-consciousness may indicate that there is a tendency for females who identify with masculine and androgynous sex-roles to score lower on drive for thinness. In fact, scores on masculinity were significantly negatively correlated with scores on drive for thinness. As stated previously in Chapter II, it appears that the development of sex-role identification is a socialization process. If, in fact, sex-role transcendence is a learned process, then perhaps mental health professionals, educators and parents may want to examine the process by which some females incorporate the healthier male and/or androgynous traits. It could also be helpful for females to be included in individual and group discussions on the topic of the development of sex-role stereotypes. Specifically, the issue of the pressure to respond to society's emphasis on thinness could be addressed.

In conclusion, it appears that a continued goal for counselors and therapists in working with female adolescents should be to assist these individuals in developing higher levels of self-concept as a preventive strategy in addressing the treatment of eating disorders. It may also be helpful to assess the extent to which young adolescent females identify with feminine personality traits. However, further research will be needed to clarify the issue of types of sex-role identity and the influence they have on the quest for thinness in the young adolescent female population.

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APPENDICES

APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

DEMOGRAPHIC QUESTIONNAIRE

PART I. Child Information

INSTRUCTIONS: Please answer all the questions. Circle the answer for each question that best describes your child.

- A. What is the age of your child?
- (1) 12 years
 - (2) 13 year
 - (3) 14 years
- B. What is your child's present grade in school?
- (1) 5th grade
 - (2) 6th grade
 - (3) 7th grade
 - (4) 8th grade
 - (5) 9th grade
- C. What is your child's race?
- (1) Black/Afroamerican
 - (2) Native American
 - (3) Caucasian
 - (4) Mexican-American
 - (5) Asian-American
 - (6) Other (Explain) _____
- D. What is your child's usual grade performance in school?
- (1) Usually makes all A's
 - (2) Usually makes A's and B's
 - (3) Usually makes A's, B's and C's
 - (4) Usually makes B's and C's
 - (5) Usually makes B's, C's and D's
 - (6) Usually makes C's and D's
 - (7) Usually makes C's, D's and F's
 - (8) Usually makes D's and F's

E. I would describe my child's body weight as

- (1) average
- (2) above average (overweight)
- (3) below average (underweight)

PART II. Family Information

INSTRUCTIONS: Please answer all the questions. Circle the answer for each question that best describes your family.

A. Your marital status is:

- (1) married
- (2) separated
- (3) divorced
- (4) have never been married

B. What was your total family income during the past year?

- (1) \$ 0 to \$ 9,000
- (2) \$10,000 to \$14,000
- (3) \$15,000 to \$19,000
- (4) \$20,000 to \$24,000
- (5) \$25,000 to \$29,000
- (6) \$30,000 to \$34,000
- (7) \$35,000 or more

C. What is your highest level of education?

Mother:

- (1) 0 to 11th grade
- (2) high school graduate
- (3) some college credit
- (4) college graduate
- (5) Masters degree
- (6) M.D., Ph.D., J.D. or equivalent

Father:

- (1) 0 to 11th grade
- (2) high school graduate
- (3) some college credit
- (4) college graduate
- (5) Masters degree
- (6) M.D., Ph.D., J.D. or equivalent

APPENDIX B

DESCRIPTION OF STUDY

DESCRIPTION OF STUDY

Dear Parents.

I am a Counseling Psychology doctoral student from Oklahoma State University. I am conducting some research under the supervision of Dr. Brent Snow to meet the requirements for my dissertation. I have previously worked as an elementary teacher and a school counselor, and I am very interested in the healthy development of children and adolescents. The research I am conducting will add to this body of knowledge.

The topic of my study is what factors in girls ages 12 to 14 may relate to their over concern with body weight. I will administer three tests to each girl who participates in the study. One test will measure the girl's level of self-esteem. The second test will examine how the girl identifies with personality traits that are considered to be masculine, feminine, or both. The third test will measure the extent to which the girl is concerned with her body weight. In addition, you are requested to complete the attached questionnaire and return it, along with the attached permission form, to the school office.

All responses on the tests and on the questionnaire will be gathered in strict conformance with American Psychological Association guidelines for human subjects participation. Responses will be completely anonymous. No one will know or have access to your daughter's scores. The responses will not become a part of your daughter's school records. Also, the responses will not be made available to the teachers, administrators or other staff at your school. The results of this study will be reported as group data, not as individual responses.

If you should have any questions about this study, please contact Donna Fleming at (405) 372-5811 or Dr. Brent Snow at (405) 744-6036. If you have any questions about your daughter's rights as a research participant, please contact the Office of University Research Services, Oklahoma State University, 001 Life Sciences East, (405) 744-6991.

Your cooperation and efforts are greatly appreciated.

Brent M. Snow, Ph.D.
Associate Professor
Oklahoma State University
Stillwater, OK 74074

Donna Fleming
Doctoral Candidate
Oklahoma State University
Stillwater, OK 74074

APPENDIX C

PERMISSION FORM

PERMISSION FORM

I give permission for my daughter, _____
 (name)

to participate in a study of factors that relate to over concern with body weight. I understand that my daughter will fill out the Piers-Harris Children's Self-Concept Scale, the Adolescent Sex Role Inventory, and the Eating Disorders Inventory.

I further understand that my daughter's confidentiality will be completely protected. She will be identified to the researcher only by a number. The scores that my daughter receives on the tests will not be shared with the teachers or school administrators or anyone else, and will not become a part of her school record.

 (Signature of Parent or Guardian) (Date)

 (Signature of Parent or Guardian) (Date)

 I have read this explanation concerning my participation and understand my rights. I give permission for my daughter to participate as a subject in this research project. I further understand that this sheet will immediately be removed from the rest of the packet so that no identifying information will be stored with the questionnaire or test instruments.

 Name

 Witness

 Date

 Date

A summary of the results of this study will be available to you upon your request. Include your name and mailing address ONLY if you want this feedback. This page will be immediately detached from your responses.

_____	_____
Name	Address
_____	_____
City	State

APPENDIX D

ASSENT TO PARTICIPATE

ASSENT TO PARTICIPATE

Thank you for volunteering to participate in this study. The questions you will be asked to respond to are part of an ongoing study to understand what factors in girls ages 12 to 14 may relate to their over concern with body weight. In participating you will be asked to complete three test instruments: the Piers-Harris Self-Concept Inventory, the Eating Disorders Inventory, and the Adolescent Sex Role Inventory. Your participation is strictly voluntary; however, your decision to take the time to complete the study will provide important information. You may withdraw from participating in this study at any time for any reason whatsoever without penalty.

All responses on the tests and on the questionnaire will be gathered in strict conformance with American Psychological Association guidelines for human subjects participation. Responses will be completely anonymous. No one will know or have access to your scores. The responses will not become a part of your school records. Also, the responses will not be made available to the teachers, administrators or other staff at your school. The results of this study will be reported as group data, not as individual responses.

If you should have any questions about this study, please contact Donna Fleming at (405) 372-5811 or Dr. Brent Snow at (405) 744-6036. If you have any questions about your rights as a research participant, please contact the Office of University Research Services, Oklahoma State University, 001 Life Sciences East, (405) 744-6991. We appreciate your cooperation and efforts.

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VITA

Donna L. Fleming

Candidate for the Degree of
Doctor of Philosophy

Thesis: SELF-CONCEPT, SEX-ROLE IDENTITY AND
WEIGHT-CONSCIOUSNESS IN YOUNG ADOLESCENT
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