THE EFFECTS OF SELF-ESTEEM
ON EARLY ADOLESCENT BODY IMAGE

The effects of self-esteem on body image in early adolescents ages 9 to 12 years old
were explored. The purpose of this study was to determine the body parts with which early
adolescents, males and females, are satisfied and dissatisfied. There were two objectives in
this study. (1) To compare body images of female and male subjects across ages of 9 to
12 years old. (2) To evaluate the satisfaction with body parts using the body part and self-esteem measure
and to determine whether males and females differ with respect to the levels of self-esteem and the
satisfaction with body parts. Sixty-two

A Thesis
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By
Charlette DeShane Tuggle, BS

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Master’s Examination Committee:
Dr. Sharron J. Lennon, Adviser
Dr. Nancy A. Rudd, Co-Adviser
Dr. Gwendolyn O’Neal

Approved by

Adviser
Co-Adviser

Department of Consumer & Textile Sciences
THESIS ABSTRACT

The effect of self-esteem on body image of early adolescents ages 9 to 12 years old was explored. The purpose of this study was to determine the body parts with which early adolescent males and females are satisfied and dissatisfied. There were two objectives in this study: (1) To compare early adolescent male and female subjects across ages of 9 to 12 years on satisfaction with body parts using the body grid and self-esteem measure and (2) to compare male and female subjects' ratings of specific body parts. Sixty-two subjects completed a body cathexis grid and self-esteem questionnaire. There were three research questions. (1) Is there a difference in satisfaction with body image among early adolescent subjects (ages 9- to 12- years-old)?; (2) Do male and female subjects differ with respect to the levels of satisfaction held for various body parts (upper torso, lower torso, limbs, and face)?; (3) Is there a relationship between early adolescent body image and self-esteem?

The one-way analyses of variance (ANOVA) found that there was not a difference in satisfaction with body image between early adolescents by age. There was no difference by sex on body image satisfaction except for the lower torso body parts. Results also revealed that self-esteem had no effect on satisfaction with the body categories of limbs, upper torso, and lower torso, but did have an effect on the facial category.
Dedicated to my loving and supportive family
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VITA

November 17, 1969 ................................................. Born, Cincinnati, Ohio

1992 ................................................................. BS Textiles and Clothing,
North Carolina Central
University, Durham, NC

1992-1994 ............................................................. Graduate Teaching Associate,
The Ohio State University,
Columbus, Ohio

PUBLICATION

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CHAPTER 1

INTRODUCTION

The term body image is defined as the mental picture or image one has of his or her body at any given moment in time (Schilder, 1950). Body image is a topic of study that is important because it is a central part of how people perceive themselves. Since body image is constantly changing, it is significantly influenced by a person’s life experiences and can cause satisfaction or dissatisfaction. In order to have positive body images people must accept their bodies. When studying body image among adolescents, it is necessary to focus on early adolescence because it is a period in which most people’s attitudes about their bodies are formed (Fallon, 1990). The body is considered the primary focus of concern during adolescence (McCandless, 1970). If there is a way to help adolescents gain control of their attitudes toward their bodies and realize the benefits of having a positive attitude toward their bodies, then many of the hazards, such as eating disorders that may develop later in life, might be controlled or even avoided.

Statistics show that there is a need to help adolescents, especially females, develop a positive body image. In 1986, 2% of the population was affected by anorexia nervosa and of this 2%, 90 to 95% were adolescent females (Grant & Fodor, 1986). Anorexia nervosa affects females fifteen times more than males and usually begins during adolescence (Abrahams & Llewellyn-Jones, 1992). Between 80 and 95% of bulimics are women (Matthews, 1991). A 1991 study revealed that 19% of college women may have bulimic episodes (Matthews, 1991). Binge-eating usually starts between ages 15 and 24
and follows a period of increased concern about body weight and appearance (Abrahams & Llewellyn-Jones, 1992). The prevalence of eating disorders and dieting behaviors among women has increased by 15% during the past twenty years (Cohn & Adler, 1992). The increase has also spread to adolescents girls who are not anorexic but who are dissatisfied with their body images. At any one time a large number of adolescent girls are on diets, with estimates ranging from 25% (Leon et al., 1989) to 63% (Rosen & Gross, 1987). In many girls negative attitudes and beliefs related to ideal body size seem to be established before high school and will likely remain constant. These findings are a cause for concern since poor body image together with weight loss behaviors have been associated with disordered eating in female adolescents (Paxton, Wertheim, Gibson, Szmukler, Hillier, & Petrovich, 1991).

Male adolescents are also affected by eating disorders and dieting. However, research suggests (Garrow, 1981; Paxton et al., 1991) that boys have a stronger tendency than girls to be less critical of their body size. Boys also believe that losing weight would be detrimental, suggesting that size, though not necessarily fatness, is regarded as a positive feature in boys (Paxton et al., 1991).

The theoretical perspective that will be used in this research is the theory of social comparison, developed by Leon Festinger (1954). The theory contains two basic ideas: (1) people have a drive to evaluate themselves; and (2) in the absence of nonsocial means, they will evaluate themselves by comparison with other people.

Through social comparison a person can determine what emotions he/she is feeling, how strong the emotions are, and the appropriateness of his/her reactions. An important point of social comparison is that when an individual is uncertain about his/her feelings, he/she seeks to understand them. When other people are the only useful source of information, he/she compares himself/herself to them. The more uncertain an individual is about his/her feelings, the more he/she will want to affiliate with others in order to
reduce the uncertainty. According to the theory of social comparison, a person should have strong needs to affiliate in order to find out what others are feeling and thereby to evaluate and clarify his/her own reactions (Freeman, Carlsmith, & Sears, 1970). The theory of social comparison will be used to understand why adolescents evaluate themselves with other adolescents in their age groups, particularly with respect to body image. Developmental contextualism will also supplement social comparison theory to help understand why adolescent's physical development and peer relationships influence body image.

Justification

The overwhelming need in research on adolescent body image is to understand how adolescents perceive themselves. Numerous studies have been conducted to assess an adolescent's self-concept as it relates to body image (Lerner, Orlos, & Knapp, 1976; Lerner & Karabenick, 1974; Koff, Rierdon, & Stubbs, 1990) and on the relationship between eating disorders of adolescents and body image (Brown, Cash, & Lewis, 1989; Attie & Brooks-Gunn, 1989). The consequences of having a poor body image can lead adolescents to use extreme weight reduction methods, such as vomiting or fasting (Paxton et al., 1991; Rosen & Gross, 1987). Although studies have concentrated on poor body image leading to eating disorders and low self-esteem, many studies do not estimate what specific body parts with which the satisfaction occurs. There is still a need to extend this area of research with respect to the measurement of body image, specifically with respect to specific parts of the body.

Adolescence is a time of "storm and stress" for most males and females. Therefore it is important to study why body image plays such an important role among adolescents.
A determination of why adolescents perceive their bodies the way they do can be helpful in identifying the body parts they are most worried or concerned about, and want to change or not change. The onset of puberty is just one reason adolescents have a change in their body image. The current research will help determine the body parts with which early adolescents are satisfied and those with which they are not satisfied. Adolescents need to find ways to accept their bodies during periods of change beginning at puberty. For example, many adolescents do not understand these changes, but do feel pressure to be thin to conform to the cultural ideal of thinness (Cohn & Adler, 1992; Fallon, 1990; Franzoi & Herzog, 1987) which may encourage adolescents to engage in hazardous behaviors as anorexia and bulimia. Among females, adolescence is the period of greatest risk for eating disorders and for body image preoccupation and problems (Brown, Cash & Lewis, 1989). Given this, research is needed to study why early adolescents perceive their bodies as they do.

**Objectives**

The purpose of this study was to determine the body areas with which early adolescent males and females are satisfied and dissatisfied. There are two objectives for this study: (1) To compare early adolescent male and female subjects across ages 9 to 12 on satisfaction with body parts and on self esteem and (2) To compare male and female subjects’ ratings of specific body parts.
Operational Definitions

**Body Image:** the image of the human body means the picture of our own bodies which we form in our minds, that is to say, the way in which the body appears to each of us (Schilder, 1950).

**Early Adolescence:** Encompasses the profound physical and social changes that occur with puberty generally beginning at 9 1/2 to 14 years (Feldman & Elliot, 1990).

**Body Satisfaction:** Having a positive attitude and being secure with the appearance and body characteristics (Rauste-von Wright, 1988), as measured by a body cathexis grid for example.

**Self-Esteem:** Positive acceptance of the self synthesized from past and present biological, psychological, and sociocultural experiences (Erikson, 1968).
Research Questions

Research Question 1: Is there a difference in body satisfaction among early adolescent subjects? (ages 9- to 12-years-old)

Research Question 2: Do male and female subjects differ with respect to the levels of satisfaction held for various body parts (upper torso, lower torso, limbs, and face)?

Research Question 3: Is there a relationship between early adolescent body satisfaction and self-esteem?
CHAPTER 2

LITERATURE REVIEW

Body Image

When most people think of themselves physically, the most essential and central theme that occurs is that of the body (Fallon, 1990). The body is generally seen as a reflection of the self for most people. Body image is the way people perceive themselves and, equally important, the way they think others see them (Fallon, 1990). There is much research dealing with body image and how it affects people (e.g., Fallon & Rozin, 1985; Garner, Garfinkel, Schwartz, & Thompson, 1980; Horvath, 1979; Lennon and Rudd, 1994). Because body image is a significant influence in our lives and much research is concentrated in that area, it is important to reflect on what is known about body image.

A woman’s perception of the ideal female body shape focuses on the cultural ideal of being thin (Fallon & Rozin, 1985; Garner, Garfinkel, Schwartz, & Thompson, 1980). Her perception is that she is heavier than that ideal (Fallon & Rozin, 1985). A review of the literature that is available on the image of the body, shows that the influence of body image on self-concept is greater for females than for males (Lerner & Karabenick, 1974; Lerner, Karabenick, & Stuart, 1973; Lerner & Sorell, 1981). Women’s self-concepts are correlated with their own ideas of their attractiveness, whereas men’s self-concepts relate more closely to perceptions of their physical effectiveness (fitness) (Lerner, Karabenick, & Stuart, 1973). Furthermore, men are often more realistic and accurate than are women in
seeing themselves as others see them (Fallon & Rozin, 1985).

There are many other sociocultural factors related to body image. One of the more debatable areas is that of cross-cultural ideals of beauty and the relationship of these ideals to gender. Why is it more important for women than men to fit the culture’s image of a perfect or beautiful body? Does the culture we live in affect our opinions so much that it sways our thinking to do whatever it takes to achieve that perfect image? A review of the literature in this area may lead to a clearer understanding of the sociocultural aspects of body image.

As far back as 1874 Charles Darwin tried to understand what men find attractive about the female body. By conducting a cross-cultural survey, he concluded that men judge the attractiveness of women by a wide variety of criteria and that there is no one standard of beauty with respect to the human body. However, Kalick (1978) notes that within a given culture, a consensus prevails suggesting that regardless of age, socioeconomic status, and ethnic differences, or changing standards there is a general idea of attractiveness (Fallon, 1990). One view on the determinants of beauty is that culture is responsible for ideals of beauty and whether and how the cultural group values it (Fallon, 1990).

Besides the cultural view there are influences of gender and class on body image. Culture (Fallon, 1990; Tiggerman & Rothblum, 1988), gender (Abell & Richards, 1996; Cash & Brown, 1989; Fallon & Rozin, 1985; Koff, Rierdan, & Stubbs, 1990) and class (Garner, Garfinkel & Olmsted, 1983) influences are important in the formation of body image. Men and women differ with respect to body image and studies have been conducted that find that females are more dissatisfied with their weight and shape than males (Fallon & Rozin, 1985; Rozin & Fallon, 1988; Thompson & Psaltis, 1988). Adolescent boys are more interested in gaining or maintaining weight, whereas adolescent girls desire to lose weight begins to increase at puberty (Fallon, 1990). In two studies by
Moore, two-thirds of adolescent girls of all ages were dissatisfied with their weight (Moore, 1993), but only 33 to 42% of adolescent boys were dissatisfied with their weight (Moore, 1993).

Our culture has many times provided women with a thin ideal that they seldom match. Women more often overestimate their relative weight. They rate their bodies as heavier than they thought men preferred as an ideal (Fallon & Rozin, 1985). Fallon and Rozin (1985) also found that men judge their relative weight more accurately and generally felt that their own current body shape was very close to what women wanted in an ideal man. Thus, men’s perceptions help to keep them satisfied with their bodies, whereas women’s perceptions motivate them toward weight obsession and dieting (Fallon & Rozin, 1985). This is not to suggest that men are not dissatisfied with their bodies. Some suggest that the extent of men’s dissatisfaction with their bodies is underestimated. In research studies (Calden, Lundy, & Schalfer, 1959; Tucker, 1982), men expressed dissatisfaction with some aspect of their bodies, with the greatest dissatisfaction being toward their chest, weight, waist, and height (Fallon, 1990). Among adolescent girls, over half were dissatisfied with the shape of their bodies, perceiving thighs, hips, waist, and buttocks to be too large and breasts to be too small; one-third of adolescent boys were dissatisfied with their upper arms, chest and shoulders (Moore, 1993).

Franzoi and Herzog (1987) conducted a study to analyze what body parts and functions men and women consider important when judging physical attractiveness in their own bodies and those of the opposite sex. They found that men and women appear to emphasize different body parts when assessing one another. The major difference between men and women in judging male attractiveness is that, although women and men agree that appearance of buttocks, eyes, legs and health are important determinants of a man’s attractiveness, women place more importance on these characteristics than do men (Franzoi & Herzog, 1987).
In a study conducted by Cohn and Adler (1992), perceptions of female and male ideal body shapes were the focus. The study examined whether women overestimate the desirability of thin figures among female peers. By using body silhouettes employed by Fallon and Rozin (1985), subjects responded to four different questions on body figures (Cohn & Adler, 1992). The silhouettes were adopted from Stunkard, Sorensen & Schulzinger (1983) scale. The figures from this scale, however, were poor representations of body figures because of the inaccurate way they are drawn. Results indicate that women overestimated the extent to which thin figures were attractive to men and they also overestimated the extent to which thin figures were held as ideal by female peers (Cohn & Adler, 1992). Men in the study did not prefer figures that were as thin as the figure women thought was most attractive to men. The men also exaggerated the desirability of achieving the stereotypic ideal male physique, which appears to be more muscular than the average male body. Men’s tendency to exaggerate the attractiveness of large physiques may place underweight men at risk for disturbances in body image just as some women are at risk (Cohn & Adler, 1992).

Social class also influences body image. When dealing with body image and class, most tend to think of the rich or upper class dictating an image that others imitate. Perhaps this is because upper to middle-class women have the resources (time and money) to pursue the current fashion. The connection between thinness and upper class membership may even be responsible for a favorable stereotyping being applied to anorexia nervosa (Fallon, 1990).

As stated earlier, each culture may have its own unique definition of beauty. But because of the diversity of ways of measuring body image, it is difficult to draw cross-cultural comparisons with respect to body image, unless the study makes a direct comparison of two different cultures (Tiggemann & Rothblum, 1988). Tiggemann and Rothblum (1988) investigated attitudes about body weight and appearance among
undergraduate students at a South Australian and a Vermont University. They found in a cross-cultural comparison that half of the subjects thought themselves to be overweight to some degree, although only one-fifth of the sample was actually overweight. The study found that despite the culture, weight was a big issue for all women who felt more overweight, dieted more, expressed more body consciousness, and reported that weight had interfered more with social activities than did men. Men and women in both cultures stereotyped obese people significantly more negatively, as being more self-indulgent, less self-disciplined, lazier, and less attractive, than they did non-obese people (Tiggemann & Rothblum, 1988). These results are not surprising, given that both were conducted in Western cultures that value thinness.

Body image may influence people to monitor food intake to the point at which eating disorders develop. There are many different types of eating disorders that people have: the most common ones are anorexia nervosa and bulimia nervosa. Anorexia nervosa is an eating disorder in which a person refuses to maintain his/her body weight that is proportioned for their age and height within 15%. Anorexia behavior is characterized by obsessions with food, weight loss, compulsive dieting, and excessive physical activity. Anorexia is a compulsive psychosomatic disorder (Grant & Fodor, 1986). A person with anorexia also has an intense anxiety about gaining weight or becoming fat. Even when they are just “skin and bones,” the denial of being thin is still there. People with anorexia generally maintain their condition through fasting or food intake reduction (Fallon, 1990).

Bulimia nervosa refers to a severe eating disorder in which people, usually women, take part in habitual vomiting or abuse of laxatives or exercise after binge eating or eating a small amount of food which the person may consider fattening. By inducing vomiting, the bulimic brings back up the food they have eaten and this can occur up to 10 times a day or even more. The men who do practice bulimia nervosa usually induce vomiting
between 7 and 15 times per week (Fallon, 1990). Body image is related to anorexia and bulimia nervosa. Extensive exercise is another way to "purge" the body of food; the term exercise bulimia refers to this method of purging (Fallon, 1990).

In 1962, Bruch was the first to report that body image disturbance was a pathological feature of anorexia nervosa, which she referred to as: "the absence of concern for oneself." People with eating disorders tend to perceive themselves as unrealistically big or fat and as being grossly out of proportion in certain body areas. Garfinkel and Garner (1982) studied the eating behaviors of anorexia nervosa patients and found that anorexics who overestimated their body size were less likely to show an aversion to high concentrations of sucrose compared to anorexics who had little size distortion. This suggests that body image disturbance and abnormal eating may both be tied to an underlying disturbance in perceptual process or how a person sees himself/herself (Fallon, 1990). However, Cash and Brown (1987) found that people who do not have eating disorders often overestimate their body size just as much as women with anorexia nervosa. They also found inconsistent relationships between the size distortion of different body parts among people with and without eating disorders (Fallon, 1990). Thus both anorexic women and non-anorexic women overestimate their body size.

Body dissatisfaction can be traced to a person's attitudes about his/her body image. For example, women with eating disorders feel that other people evaluate them mainly on their appearances and that other personal attributes do not mean as much in their evaluation. For people with eating disorders, being thin is the only important aspect of their self-image and if they are not thin, they believe it proves they are weak, lazy, unlovable, and incompetent (Fallon, 1990). A person's attitude toward his or her body can lead to the development of a negative body image. This can also be tied into the cultural standards for appearance in people with eating disorders.

One of the factors in the development of body image among patients with eating
disorders is the prevailing ideal of thinness as a goal of beauty in women. Besides the messages women receive from society, there is evidence to suggest that women with eating disorders and body image disturbances may have had personal experiences of social rejection in connection with their appearances (e.g., Wooley & Kearney-Cooke, 1986). Therefore, women not only have to deal with the cultural standards of beauty and thinness, but their own experiences as well. This may lead to a negative body image and even to unhealthy actions perpetrated on the body, such as starvation or excessive diets to obtain that standard of beauty.

In the pursuit of the perfect body, many people can go beyond the norm of eating a proper nutritional diet to obtain that body. Culture, gender, and class along with other factors such as the perceptions of the bodies and of the self-concept play a big part in the development of a healthy body image for any individual. If the body is viewed realistically and if an individual learns to have positive attitudes about him/herself, then perhaps the cultural standard of beauty will not have such strong effects on our body images (Lennon & Rudd, 1994). The more one knows about the aspects of body image, the better he or she may accept the body with which they were born. However, people who do form negative attitudes about their bodies and experiences may go on to develop hazardous disorders that will give them a more perfect body (Fallon, 1990), yet at a great cost of impaired health. Another factor that influences a person’s feeling toward his/her body is self-esteem. Because this research is examining self-esteem and early adolescent body image it is necessary to review literature related to self-esteem and body image.

**Body Image and Self-Esteem**

Research on body image can examine an array of aspects of an individual’s feelings about his/her physical self, such as overall satisfaction with one’s body, (Cash & Brown,
1989; Keeton et al., 1991) or opinions regarding various body parts. Research on body image also can examine psychosocial functioning of a person such as feelings of self-concept. (Rosen & Ross, 1968; Rudd, Sloan, & Tuggle, 1993; Secord & Jourard, 1953). During adolescence, body image and self-concept are inextricably related because of the physical development of the body as a source of identity (Erikson, 1968). This section of the literature review will examine research on adolescent body image and self-esteem.

In a study by Abell and Richards (1996), gender was a variable along with class to investigate the effects they have on body shape and self-esteem. Using undergraduate subjects, Abel and Richards tested three hypotheses: (1) males were expected to be more satisfied than females with their body shape no matter what the socioeconomic status SES; (2) body shape satisfaction and self-esteem would be more strongly related in females than males; and (3) the relationship between body shape, satisfaction, and self-esteem would be higher for women of high SES, than for women of lower SES.

Like the Koff et al. (1990) study, Abell and Richards (1996) used two standard measures of self-esteem and two separate questionnaires of body image. A demographic questionnaire was used to obtain socioeconomic status from the subject’s parents. The findings of this study indicated that males reported a larger difference in weight (real and absolute values) than did females. Much of the research on weight differences found the females were more preoccupied with over estimations of weight and body shape than were males. Abell and Richards (1996) speculate about whether or not the desire of some college age males to gain weight, as suggested by the results of their study, could ultimately lead to problematic behaviors such as high fat diets, or unhealthy practices of steroid use to develop muscles. The males in this study however, did not necessarily want to look heavier but wanted to be physically stronger and more muscular. The females in the study did appear to be dissatisfied with their body shape. However, females reported a
significantly larger difference in figure score than did males. The females were more
dissatisfied with their body shape (Abell & Richards, 1996).

The assessment of body image and self-esteem showed that overall body image
scores were related to the self-esteem scores at a high level for both males and females.
The level of this relationship did not vary by sex. The aspect of body image as it relates to
self-esteem did distinguish males from females. Abell and Richards (1996) found partial
support for their second hypothesis. Women who reported a greater desire for a thinner
figure had lower self-esteem scores, whereas for men there was no relationship between
these variables. The third hypothesis was supported, that correlation between satisfaction
with body shape and self-esteem would be greater for women of higher SES (Abell &
Richards, 1996).

Gender differences in early adolescent self-esteem/self-concept were studied by
Rosenberg and Simmons (1975). Using subjects from grades 3 through 12, aspects of
self-concept were examined. In other words, how boys and girls differ in their
development of self-esteem and self-consciousness was studied over time.

Some of Rosenberg and Simmons (1975) findings indicate that girls are somewhat
more likely than boys to have low self-esteem, but girls are considerably more likely to
have high self-consciousness (5% difference for self-esteem versus 11% difference for
self-consciousness). The most striking findings appeared to be the dramatic increase in
self-consciousness in early adolescence among girls (Rosenberg & Simmons, 1975). This
increase can be contributed to girl’s feelings about what other people think of them and
being fearful of disapproval.

In research conducted by Mendelson, White, and Mendelson (1996), three
separate studies were conducted to examine the effects of gender, age and weight on
self-esteem and body esteem. The first study used subjects ages 8 to 12, the second study
used adolescents 13- to 15-years-old, and the third study used a longitudinal approach
with a combination of the subjects from the first and second studies. Studies one and two established that body esteem was concurrently associated with relative weight for both children and adolescents. Because being overweight may have a delayed influence on self-esteem, the goal of the third study was to examine if self-esteem, body esteem and weight had an effect on self-esteem over a two year period.

The results of the third study indicated that no evidence was found to suggest that weight or body esteem predicted any aspect of self-esteem two years later. Results also indicated an inability to determine any links between self-esteem and body esteem over time (Mendelson et al., 1996).

Puberty development has been implied as the point of origin for decreased body satisfaction and self-concept for girls and increased body satisfaction and self-concept for boys. Folk, Pedersen, and Cullari (1993) studied body satisfaction and self-concept of third- and sixth-grade students. Using the Body Image Satisfaction Questionnaire (Rauste-Von Wright, 1989), the Piers-Harris Self-Concept scale (Piers, 1984) and height and weight measures, Folk et al. (1993) sought to find a consistent relationship for early adolescents between body image satisfaction and self-concept.

Folk et al. (1993) found that for boys in third grade, there was generally no relationship between body satisfaction and self-concept (except for total self-concept and leg satisfaction). For sixth-grade boys there was a significant correlation between total body satisfaction and self-concept, the sixth-grade boys were also more dissatisfied with their bodies than third-grade boys (Folk et al., 1993).

For third- and sixth-grade girls a significant decrease in body satisfaction and self-concept was not observed. However, significant correlations between body-satisfaction and total self-concept scores were found at both grade levels for girls. As expected, sixth-grade girls showed a negative correlation's between actual body weight and body satisfaction. The results of this study were somewhat unexpected which Folk et
al. (1993) explain may be caused by the linkage between self-concept and body satisfaction. It is possible that the relationship between self-concept and body satisfaction is not necessarily brought on by puberty development but caused by the social importance placed on obtaining a perfect body (Folk et al., 1993). Because there is concern with body image and how it affects people's lives, it is important to have valid and reliable measures of body image and self-concept to demonstrate that a relationship between the two variables do exist.

**Measures of Body Image**

In recent years there has been a noticeable increase in research focusing on body image (Cash & Green, 1986; Cash, Winstead, & Janda, 1986; Lamb, Jackson, Cassidy, & Priest, 1993). With this surge of research has come the development of many different body image measures. Due to these different measures of body image used in studies, conflicting results have been obtained.

There are many different techniques used to measure body image, body esteem, and closely related variables. These techniques are generally broken down into three classifications. The classifications include: perceptual, affective and self report (Cardone & Olson, 1973). Because of the many different types of measures, it is important to evaluate and compare the reliability and validity of these measures.

In the next section there will be a review of the multiple techniques for measuring body image using these three categories or classifications. The section will conclude with a section on the advantages and disadvantages of the different types of body image measures.
Perceptual body image measures

The perceptual area of body image measures has been the area studied most frequently. Using perceptual measures, subjects are required to estimate the actual size or shape of their bodies or body areas (Thompson, Penner, & Altabe, 1990). One of the perceptual measures which is widely used is the Body Image Detection Device (BIDD) (Ruff & Barrios, 1986). During this procedure, subjects rate the relative sizes of their body areas from “extremely smaller than my peers” (0) to “extremely larger than my peers” (100). This latter measure, is called the Subjective Rating Index. The BIDD produces the Body Perception Index based on the accuracy of subjects’ adjustments of bands of light to estimate the width of five body areas (Cash, Wood, Phelps, & Boyd, 1991). The BIDD uses a standard overhead projector and Plexiglas template with wooden guides. Using the BIDD measure, subjects can adjust the bands of light on the device to estimate the width of their bodies at five different positions (face, chest, waist, hips, and thighs) (Keeton, Cash, & Brown, 1990).

Another form of perceptual body image measure is the image marking procedure by Askevold (1975). The Image Marking (IM) procedure is used by subjects to estimate body width of the shoulder, waist, and hips (Thomas & Freeman, 1991). Similar to the IM procedure is the Visual Size Estimation Task developed by Slade and Russell (1973). The VSET also requires the subjects to estimate the width of various body areas (Thomas & Freeman, 1991).

The Video Camera Assessment procedure is a modification of the Allenbeck, Hallberg, and Espmark (1976) procedure. The VCA procedure is employed to assess overall body - size judgments (current and ideal) from both front and profile views (Thomas & Freeman, 19991). Other perceptual techniques used to measure body image include: Katcher and Levin’s (1955) procedures involving schematic representation of body parts devised to measure physical height, width, and depth. The adjustable body
distorting mirror measure devised by Traub and Orbach (1964) was designed to determine objectively the internalized picture of the physical appearance of the body (Cardone & Olson, 1973).

Other perceptual measures are the Distortion Technique (Freeman, Thomas, Solyom, & Miles, 1983) and various silhouette procedures. All of the previous techniques and procedures require subjects to estimate the size of their body as a whole (Keeton et al., 1990).

Validity and Reliability of Perceptual Measures

For perceptual body image measures to be valid they must have a reliable relationship between the method of the measure and actual estimates of body image by subjects (Thomas & Freeman, 1991). Numerous studies have tested the constructs used to measure a person’s body image. However, clear conclusions regarding the validity of the various measures require **multimethod, multimodal assessment studies** (Keeton et al., 1990). This means that many perceptual measures of body image require different ways or methods to assess their validity. So validating research on body image measures which uses perceptual measures is easier said than done.

The Body Image Detection Device (Ruff & Barrios, 1986) underwent a fundamental examination when utilized by Ruff and Barrios (1986) to determine its reliability and validity. Ruff and Barrios decided to utilize their Body Image Detection Device as the apparatus. The results of their research concluded that the BIDD yielded measures which were highly reliable across three fronts: Inter-rater reliability, internal consistency, and temporal stability. The assessment scheme appears quite compatible with the prevailing conceptualization of body image in physical estimations and attitude (Ruff & Barrios, 1986). Even though Ruff and Barrios conducted a seemingly intensive study using the BIDD, they still could not establish a strong case for the device’s validity. In
other words, although the reliability of body image assessment has been determined, its content validity awaits confirmation because of inconsistent findings in different perceptual measures (Ruff & Barrios, 1986). The disadvantages of the BIDD appears to be its expensive cost and its difficult implementation. Its advantage is that the BIDD seems to be psychometrically sound (Ruff & Barrios, 1986). Favorable internal and temporal reliability's for the subjective rating index and the body perception index were also reported by Ruff and Barrios (1986).

The image marking (IM) procedure (Askevold, 1975) is unique among available methods for assessing body image, in that the investigator stands immediately behind the subject and designates the body widths to be marked by firmly touching the subject (Thomas & Freeman, 1991). Because of the requirements used to administer the IM, many researchers find the IM to impose awkward physical demands on subjects when marking certain body regions. Because of these physical constraints, subjects may tend to overestimate their body widths. These disadvantages have been seen in other procedures (e.g., the VSB technique) (Thomas & Freeman, 1991). Thomas and Freeman's results from their study on body image marking indicate that IM estimates do not converge meaningfully with measures of body image derived by alternate methods. They also indicate that a more thorough evaluation of the body width estimate process is needed (Thomas & Freeman, 1991).

Traub and Orbach's (1964) adjustable body distorting mirror was used in a study done by Cardone and Olson (1973), to compare three different levels of body image satisfaction. The adjustable body distorting mirror was used as the perceptual measure. The apparatus consists of a sheet of vacuum aluminum-plate Plexiglas, suspended between the jaws of movable clamps. The mirror can be adjusted to reflect the body of subjects on a distortion continuum ranging from extremely distorted to completely undistorted (Cardone & Olson, 1973). A subject who scores high on the mirror measure is less able to
correctly judge what he/she looks like. In addition, a subject can show disturbances in the
distorted mirror and not find disturbances on other body image measures which included
the image marking (IM) procedure (Cardone & Olson, 1973).

More research will need to be conducted to find further evidence of validity and
reliability of perceptual body image measures. However, as the research was reviewed,
the conclusions illustrate that the reliability of perceptual measures is easier obtained than
the validity of perceptual measures. Thus, the problem with many perceptual measures of
body image lies in the validity. Some measures do not have acceptable reliability and few
instruments have been evaluated with different population groups. According to Cash and
Pruzinsky (1990) “there are also pertinent methodological issues which should be
considered when using the perceptual measures. For example, the specific instructional
information given by subjects may affect their ratings” (p.32). There is also the
consideration that subjects may overestimate, depending on how they are asked to rate
their bodies. Finally, another problem with perceptual measures deals with the sex of the
experimenter. Few studies report this information and only one study has experimentally
varied experimenter sex (Thompson & Connelly, 1988). Sex of experimenter may be
important because estimations of female subjects may differ when made by a male versus a
female experimenter. Although no differences were found between the estimations of
subjects, it is still considered an area that needs to be evaluated (Thompson, Penner &

Affective Body Image Measures

As there are several different perceptual body image measures, there are also
several different affective measures. Affective measures of body image are mainly
self-report, paper-and-pencil instruments which ask subjects to estimate the size of various
body areas relative to those of peers (Keeton, Cash, & Brown, 1991). Among the many
affective body image measures, the vast majority are either: (a) self-report and (b) schematic figures. The Body Cathexis Scale (Secord & Jourard, 1953) was designed to measure satisfaction with 46 parts and body functions on a five-point Likert-type scale. The Body-Self Relations Questionnaire (Butters & Cash, 1987; Cash & Green, 1986; Noles, Cash & Winstead, 1985; Winstead & Cash 1984) consists of 140 statements about the body in which subjects respond on five-point scales ranging from definitely disagree (1) to definitely agree (5). The BSRQ consists of nine subscales for each of three schematic domains which include appearance, fitness, and health (Keeton, Cash, & Brown, 1991).

There are several other self-reported body image measures on the affective level include the Body Parts Satisfaction Scale (BPSS) (Berscheid, Walster & Bohnstedt, 1973). The BPSS lists 24 body parts, rating each on 6-point scales ranging from extremely dissatisfied (1) to extremely satisfied (6). The Eating Attitudes Test (EAT) was originally developed by Garner and Garfinkel (1979) to assess attitudes and behaviors characteristic of anorexic patients. The EAT may be most appropriately used as an index of the severity of concerns typical among women with eating disorders, particularly drive for thinness, fear of weight gain and restrictive eating (Garner & Garfinkel, 1979). The Eating Disorder Inventory (EDI) developed by Garner, Olmstead, and Polivy (1983), is a 64-item self-report inventory designed to assess attitudes and behaviors common to anorexia nervosa and bulimia (Thomas & Freeman, 1990). However, the EDI was not developed to measure body image but to assess eating disorders. Similar to the EDI is the Eating Disorder Examination (Cooper & Fairburn, 1987) which not only asks questions related to being preoccupied with appearance and the desire to be thin, but uses scales to determine the degree of importance the subject places on shape and weight (Rosen, Srebnik, Saltzburg, & Wendt, 1991). Also reported by Rosen et al. (1991) for self-report body image measures is the Body Shape Questionnaire (Cooper & Fairburn, 1987), which
measures body dissatisfaction, fear of fatness, feeling of low self-worth because of appearance and desire to lose weight. The Body Image Avoidance Questionnaire (Rosen et al., 1991) is a self-report of behavior tendencies using a six-point scale to rate body dissatisfaction (Rosen et al., 1991).

There are numerous other self-report instruments used to measure body image. One such instrument is the Body Esteem Scale. The following measures were used in a study reported by Thomas and Freeman (1990) on the validity of the Body Esteem Scale and subscales. The Body Esteem Scale (Franzoi & Shields, 1984) is used to study attitudes in at-risk populations such as people who have low self-esteem. The BES contains 35 items and is related to Secord and Jourard’s (1953) Body Cathexis Scale, but the BES gives scores on three dimensions of body esteem for both men and women. The three dimensions of body esteem for females were physical attractiveness, weight control, and general physical condition. The three factors for males deal with upper body strength, physical attractiveness, and general physical condition. Also the Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975), a 23-item questionnaire with three subscales, and the Tennessee Self-Concept Scale (Fitts, 1965), a 100-item self-report instrument, were developed as self-concept measure for clinical and research settings (Thomas & Freeman, 1990). The Tennessee Self-Concept Scale is used mainly to measure the self-concept but can be used in conjunction with other body image measures such as the Rosenberg Self Esteem Scale. The Rosenberg Self-Esteem Scale (1965) consists of 10 items answered on a 4-point scale, and does not contain items related to body-esteem. The scale which will be used as the self-esteem measure in the present research is adapted from the Rosenberg Self-Esteem Scale using ten statements with responses ranging from 1= strongly agree to 5= strongly disagree; the original scale had only four possible responses.

Just as the self-reported instruments for measuring body image are important and numerous, so are the affective measures. The affective measure is used to rate a subject’s
various body parts in relation to likes or dislikes (Keeton, Cash, & Brown, 1990). The most widely used have been those that rely on schematic figures or the type in which the subject is asked to draw the human figure which is to represent the drawer's own body. The Draw-A-Person Test (Silverstein, Carpman, Perlick, & Perdue, 1990) has been used as an example for other tests using similar techniques to measure body image. Among the other tests similar to Draw-A-Person Test is a technique in which subjects, who are blindfolded draw a picture of themselves in space (Cardone & Olson, 1973). Also used as a self-reported instrument is the Color-A-Person: A New Body Image Test (Wooley, 1985) which consists of an outline drawing of the human body, front and side view and is divided into body parts of hair, face, shoulder, chest/bust, upper arm, lower arm, hand, midriff, abdomen, hip, thigh, leg (calf), ankle, feet, and buttocks. Subjects color in an age- and sex-appropriate drawing with five different colors, indicating by the color used their level of dissatisfaction from very satisfied to very dissatisfied. The Color-A-Person measure provides both qualitative and quantitative data on body part satisfaction (Wooley, 1985). For the current study a body grid will be utilized to determine specific body parts early adolescents are satisfied or dissatisfied with. The grid is discussed in detail later in the chapter.

Other techniques designed to explore the affective level of body image is a figure rating type instrument used and devised by Stunkard, Sorenson, and Schelsinger (1983). The measure consists of nine silhouette drawings of women, ranging from 1 (very thin) to 9 (very heavy) (Thomas & Freeman, 1991). However, the drawings used in the Stunkard et al., 1983 study are poorly drawn and represent unbelievable body shapes. The Stunkard body shape figure scale as it is called was used in a study by Lamb, Jackson, Cassidy and Priest (1993). The figure scale consists of ten silhouettes of men and women and Lamb et al., (1993) used the Stunkard scale to investigate the responses of four different groups. The study investigated some potential determinants of the increase of eating disorders
among women in the US. Lamb et al. (1993) found that college women, older women, and older men considered their present body shape to be heavier than their ideal body figure. Only the college men were satisfied with their current body figures (Lamb et al., 1993). The study did not discuss how the method of measuring body image affected the outcome of this research study on body figure preference.

Markus, Hamill and Sentis (1987), conducted a study to explore the functions and content of schemes about body image with an emphasis on body weight. Their experimental session consisted of three tasks dealing with traits, silhouettes, and food. In Task 2 of their experiment they presented to subjects silhouettes that were to represent different body shapes. Of the twenty-seven full-length body silhouettes, seventeen were front views and ten were side views. Eight silhouettes were of overweight figures, eight were thin and eleven were of medium weight. The silhouette section of the experiment was used to find what subjects thought about themselves and what their bodies looked like. The results of the Markus et al. (1987) study found that from their first laboratory test that the schema that pertains to body weight or body image imply that all individuals have some idea of what their own body image is (Markus et al., 1987).

Validity and reliability of affective measures of body image

Beginning with the Body Cathexis Scale (Secord & Jourard, 1953), validity and reliability have been ascertained. The Body Cathexis Scale is basically useful for simple ratings of satisfaction with body parts. The reliability of the Body Cathexis Scale has been tested for internal consistency with a split-half reliability of .78 for males and .83 for females but no test-retest has been reported on this scale (Fallon, 1990). Reliability for various BC-SC (self-concept) scores are moderately high; they may be regarded as more impressive when it is recalled that subjects displaying the most consistency were removed from the sample (Secord & Jourard, 1953). The Body Self-Relations Questionnaire

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(Butters & Cash, 1987; Cash & Green, 1986; Noles, Cash, & Winstead, 1985; Winstead & Cash, 1984), now the MBSRQ, is a questionnaire measure with nine subscales ranging from cognitive, affective, and behavioral scales for each of three domains of appearance, fitness, and health. The physical appearance evaluation scale has been used extensively in research on body image (Pasman & Thompson, 1988; Thompson & Psaltis, 1988). The BSRQ has internal consistencies of .68 to .91. The BSRQ has also been retested to determine internal consistency (Cronbach’s alpha) reliability with scores of .65 to .91 (Cash & Green, 1986).

The reliability and validity of other affective measures of body image that will be discussed include the Body Parts Satisfaction Scale (BPSS), the Eating Disorder Inventory (EDI) and the Body Shape Questionnaire. The Body Parts Satisfaction Scale (BPSS) which was developed by Berscheid, Walster, and Bohnstedt (1973) was found to be reliable (Keeton, Cash & Brown, 1990). The Eating Disorder Inventory (EDI) (Garner, Olmsted, & Polivy, 1983) has a self report measure of interceptive awareness contained within its inventory. Because of the disturbed and high scores, there is a suggestion that the Interceptive Awareness Scale of the (EDI) taps into complaints of emotional confusion. It is also questionable whether subjects can accurately appraise and report the type of disturbance in perception (Fallon, 1990). The Eating Attitudes Test (Garner & Garfinkle, 1979) was found to have a high internal consistency (.79). Test-retest reliability has been shown to be satisfactory, at .84 for a period of 2-3 weeks (Thompson, 1996). Finally, the Body Shape Questionnaire (Cooper, Taylor, Cooper & Fairburn, 1987) has been used for its validity and high correlation with other measures (e.g., Body Image Avoidance Questionnaire). Rosen, Srebnik, Saltzberg, and Wendt (1991) found that the Body Shape Questionnaire proved to be valid when compared with the Body Image Avoidance Questionnaire (Rosen et al., 1991). The reliability of the Body Shape Questionnaire has been established with high internal consistency (r = .93) for females.
(Fallon, 1990). The Body Image Avoidance Questionnaire (Rosen et al., 1991) has also been tested for validity and reliability by Rosen et al. (1991). The internal consistency of the (BIAQ) has a Cronbach's alpha of .89 which is a good internal consistency. The test-retest reliability had coefficient r(23) = .87, p < .0001 indicating that responses on the measure were stable scores over a short period of time. The concurrent validity indicated that self-reported behavioral avoidance was modestly associated with size overestimation. Also it should be noted that the BIAQ had strong associations with more negative attitude toward weight and shape (Rosen et al., 1990).

The final affective measure of body image discussed herein is the measure by Stunkard, Sorenson, and Schelsinger (1983). This device also known as the Stunkard Body Shape Figure Scale consists of ten silhouettes of both male and female body types (Lamb et al., 1993). Although the measure has been used in several studies (Lamb et al., 1993; Stunkard & Stillar, 1984) no reliability or validity estimates could be found.

As previously mentioned, the validity and reliability of perceptual and affective measures of body image are hard to establish, especially if no research has been conducted on the measures (Cardone & Olson, 1973). This becomes a problem when researchers decide to use one of these methods to measure body image because the reliability of instruments used might not have been established. There are numerous techniques developed to study body image because of the popularity and importance that body image has in our society. The main problem with affective measure of body image seems to be found in the inability to confirm reliability and validity in many measures (Cardone & Olson, 1973). There is also the question of how the figures in figural/schematic studies are drawn to represent different body sizes (Thompson et al., 1990). Affective measures such as the Figure Rating Scale (Fallon & Rozin, 1985; Keeton et al., 1990; Thompson & Psaltis, 1988) and silhouettes used by Markus et al., (1987) do not represent ideal or realistic figure measures for researchers to utilize. Sometimes the words used to describe...
such figures are misleading (Singh, 1993).

The body cathexis grid which is fully explained in the methodology section, uses front and side views of a line-drawn body figure for both the male and female adolescent body which was adapted from Marilyn Horn (1968). The 61/2 head length mesomorphic figure has 42 cells. Subjects are asked to color in the cells. Five colors are used ranging from red (very dissatisfied) to blue (very satisfied), using the method piloted by Rudd, Sloan and Tuggle (1993) in their study of body satisfaction among college students. The visual grid shows ideal and realistic representations of both the male and female human bodies was modified to fit the body proportions of early adolescent sizes. The body grid may provide a more reliable affective measure in body image research.

**Adolescence and Body Image**

Implications of the adolescent’s body and body image have been topics of increasing research attention. Many studies have been conducted to understand the connection between adolescents, body image and self-concept (e.g., Secord & Jourard, 1953; Lerner & Karabenick, 1974; Koff, Reirdan & Stubbs, 1990). The period of adolescence is considered a time of “storm and stress” because during early adolescence the body becomes a focus of importance especially for females. As the majority of girls reach puberty, they begin to move away from the lean, prepubertal body (Faust, 1983). At puberty, females then become less satisfied with their bodies as they mature and begin to deviate from the ideal (Koff, Rierdon, & Stubbs, 1990). For males however, the opposite occurs in reference to body satisfaction. As the male experiences puberty, it is likely that males would become more satisfied with their appearances as their bodies mature and begin to approach the ideal. Young adolescent males also exhibit more positive attitudes toward their bodies (Koff et al., 1990).
These changes in body image in adolescence may occur for several reasons. One reason may be that following the onset of puberty, females experience a stronger relationship between body image and self-concept because of gender-related pressures to attain a thin body type. (Garfinkel & Garner, 1982). Also the factors of social class and socialization can be associated with females’ preoccupation with their bodies that males may not encounter. From a historical perspective, the preoccupation with weight and thinness in middle- to upper-middle-class women reflects a growing trend (Attie & Brooks-Gunn, 1989). With socialization, the development of body image can be based on how one is introduced to bodily functions (Rosen, 1990).

Another reason adolescent girls may have problems dealing with their body image is their increase in bodily fat that occurs during puberty, a necessary precursor to child-bearing. For adolescent girls the increase of body fat is one of the most dramatic physical changes they experience (Attie & Brooks-Gunn, 1989; Brooks-Gunn & Warren, 1985). Increases in body fat during this period are associated with desires to be thinner (Attie & Brooks-Gunn, 1989). Also other changes during puberty for adolescent girls such as breast development and early maturation (Attie & Brooks-Gunn, 1989; Brooks-Gunn, 1988) may contribute to efforts to control weight. Also, girls have a particularly large spurt in hip growth and in contrast to boys, do not lose fat during this spurt. In fact girls have a general tendency to increase their body fat, particularly on the upper legs, as they cease to gain height. Fat is also deposited beneath the skin, in the breasts and over the hips (Abrahams & Llewellyn-Jones, 1992). The weight gain experienced at puberty for girls is based on the fat gain, whereas boys’ weight gain is an increase in muscle (Rudd & Lennon, 1995).

A study conducted by Koff et al. (1990) sought to determine the relationship between body image and self-concept in ninth-grade males and females. The focus of this study was on gender differences in body image and in the relationship between body image
and self-concept. Three variables were examined: structure of body image, valuation of body image, and the degree of the relationship between valuation of body image and self-concept. Their results showed that significant sex differences do exist in the structure and valuation of body image. Females had more differences in their attitudes toward their bodies than males. They also found that the early adolescent males were more satisfied with their bodies than early adolescent females. Koff et al. (1990) observed that their findings were consistent with predictions derived from Erikson's (1968) theory (Koff et al., 1990). Erikson (1968) characterized the body as a source of identity and self-concept in the life stage of adolescence. In the general development process, sexual formation becomes coupled with increasingly divergent psychosocial experiences, and leads to gender differences in body attitudes, self-concept, and their relationship (Koff et al., 1990).

There have been several studies conducted to evaluate physical attractiveness, body attitudes, and self-concept in late adolescents (Lerner & Karabenick, 1974; Lerner, Karabenick & Stuart, 1973). These studies used a 24-item body characteristics method to rate (a) how satisfied they were with each of these parts of their own body; (b) how important each part was in determining their own physical attractiveness; and/or (c) how important each part was in determining opposite-sex physical attractiveness. In the study done by Lerner, Karabenick and Stuart (1973) 180 male and 190 female college students rated the 24 body parts. The researchers found that males and females both rated the importance of the body parts for their own bodies and opposite-sex bodies similarly. One such body part rated similarly by both sexes were the ankles. However, there were discrepancies in the rating of other body parts. For example, both males and females agree "width of shoulders" and "height" were considered more important for males than for females. However "hips," "shape of legs," and "thighs" were considered more important for females than for males (Lerner et al., 1973). The same results were reported from the
Lerner and Karabenick (1974) study, which used fewer male subjects. As in the Lerner, Orlos and Knapp (1976) study, similar results were found. The findings of the Lerner, Karabenick and Stuart (1973) study indicate that females’ self-concepts are strongly related to their attitudes about their bodies’ physical attractiveness (Lerner et al., 1976).

In contrast, Koff, Rierdan and Stubbs (1990) conducted a study on early adolescent body image and self-concept. They studied the relationship between the body image and self-concept of several early adolescents instead of college students. One hundred and sixty-nine ninth-grade males and females served as subjects. Three specific hypotheses were tested. The first stated that females would have more differentiated body images than males. The second hypothesis stated that males would value their bodies more than females. The third hypothesis stated that the degree of relationship between valuation of body image and self-concept would be stronger for females than for males (Koff et al., 1990).

The two measures of body image employed by Koff et al. (1990) consisted of a Body Satisfaction Scale which is a modified form of Koff, Rierdan and Silverstone’s (1978) Body Cathexis Scale. The Body Cathexis Scale is derived from Secord and Jourard’s (1953) Body Cathexis and the Body Experience Scale by Reirdan, Koff and Stubbs (1987). A self-esteem scale and self-awareness scale were also used to measure self-concept.

The results from the Koff et al. (1990) study demonstrated significant sex differences in the structure (body experience) and valuation (body satisfaction) of body image. In terms of structure, they found that females had a more differentiated and males a more global set of attitudes toward their bodies, meaning that females were more dissatisfied with their bodies and had more differences in their opinions of their bodies. In terms of valuation, males were more satisfied with their bodies and experienced them more positively than did females (Koff et al., 1990). Koff et al. (1990) also suggest the two
independent developmental trends that were discussed earlier in this section of the literature review, those of body satisfaction and self-concept.

Since a substantial amount of research has focused on adolescents and body image, there is one bit of research that should be examined (Keeton et al., 1990; Koff & Rierdan, 1990; Lerner & Karabenick, 1974; Lerner et al., 1973). The research is that of Secord and Jourard (1953) who are known for their Body Cathexis Scale. The basis of their research was in relation to body-cathexis and theory of personality. Secord and Jourard (1953) believed that body-cathexis was related to self-concept. Thus, they formulated three hypotheses to be tested.

1. Feelings about the body are associated with feelings about the self, when both are appraised by similar scales.

2. Negative feelings about the body are associated with anxiety, in the form of undue autistic concern with pain, diseases, or bodily injury.

3. Negative feelings about the body are associated with feelings of insecurity involving the self.

Secord and Jourard (1953) used a body-cathexis scale for subjects to rate various parts and functions of the body. The subjects rated items about the self and completed a homonyms test of body cathexis which were used with the Maslow Test of Psychological Security Insecurity. The homonym test of body cathexis consisted of a list of seventy-five homonyms, each of which has meanings pertaining to the body and meanings not related to the body (Secord & Jourard, 1953).

The results of Secourd and Jourard’s (1953) study supported the hypothesis that the valuation of the body and the self tend to be related. Also the hypothesis that low body-cathexis is associated with anxiety in the form of exceeding self-centered concern
with pain, disease, or bodily injury was upheld by the significant relationships between low body-cathexis as shown by the body scale and the homonym test. The hypothesis that low body-cathexis is associated with insecurity was sustained by the correlation between the body cathexis scale and the Maslow Test (Secord & Jourard, 1953). Secord and Jourard are well-known researchers in the area of body-cathexis and self-concept and have played a major role in aiding other researchers in conducting studies on body image (Dworkin & Korr, 1987; and Reirdan, Koff & Stubbs, 1987).

Reirdan, Koff and Stubbs (1987) studied body image and the psychological state. Their study focused on depressive symptoms in adolescent girls as it related to body image. Reirdan et al. (1987) wanted to examine the increasingly significant problem among adolescents with depression and the possible risk factors that accompany depression. Five hundred and thirty five girls in grades 6 through 9 served as subjects to measure the possible relationship between depression and body image.

Reirdan et al. (1987) used four measures and procedures to measure body image and depression. The Beck Depression Inventory (Beck & Beck, 1972) was used to assess levels of depression. A modified form of the Body Cathexis Scale (Secord & Jourard, 1953) was used to rate aspects of the body in terms of satisfaction on a 5-point scale. A Body Experience Scale was developed for this study to assess dimensions of bodily experience that are absent from other body image measures. This scale consists of 14 word pairs (e.g., healthy / sick) to rate experience of the body by subjects. Finally subjects used a scale called Girls Grown Up, which has been used in previous research (Koff et al., 1978; Reirdan & Koff, 1980), in which each of the subjects was asked to indicate the onset of a variety of activities associated with maturing (e.g., wearing a bra) (Rierdon et al., 1987).

The results of the Reirdan et al. (1987) study were consistent with the findings for similar studies using late adolescents (Golberg & Folkins, 1984). The Reirdan et al.
(1987) study found that early adolescent girls rated as moderate to severely depressed on the Body Depression Inventory are generally less satisfied with their bodies and described their bodies in more negative terms than do their non or minimally depressed counterparts (Reirdan et al., 1987). Not only did the girls in a more depressed state find their bodies more negative, they also devalued their bodies in other ways. These devalued feelings included feeling the body was less pretty and interesting, less healthy, and weaker than the subjects with positive feelings about their bodies (Reirdan et al., 1987).

**Body Image and Sex Differences**

The body shapes/types adolescents prefer for their own bodies and the body shapes/types that adolescents prefer in the opposite sex will be discussed. Fallon and Rozin (1985) compared current and ideal figures with ratings of most attractive figures by the subject and by members of the opposite sex. Both male and female subjects in late adolescence were asked to fill out a one-page questionnaire. By doing this, subjects were to record their sex and estimate the percentage of students at their university who were of their sex and height that were heavier than they were. They were given nine figure drawings (Stunkard, Sorenson, & Schulsinger, 1983) of each sex ranging from very thin to very heavy. Each subject was asked to indicate the figure (a) that represented their current figure (Current), (b) that they would like to look like (Ideal), (c) that they thought would be most attractive (Other Attractive) (Fallon & Rozin, 1985).

The figures used may be considered unrealistic representations of the body. However, results were consistent with other literature on this subject. The results of Fallon and Rozin's (1985) study showed that current, ideal, and most attractive are almost identical for males and the males preferences of the female body became distorted with their idea of the current body figure for women. In contrast, women perceived their
current figures to be heavier than their ideal or than what they believed men’s preferences were. These findings suggest that there is some realistic basis for the discrepancy between current and ideal figures for women, and therefore pressure women to become thin and maintain a thin body figure. However, men’s preferences can account for only part of a woman’s pursuit of thinness (Fallon & Rozin, 1985). These findings indicate that a woman places pressure on herself to be thin beyond the pressures due to what she believes men feel about body size among women. The men’s feelings are not as strong as women believe them to be about their bodies.

Cohn, Adler, Irwin, Millstein, Kegeles, and Stone (1987) examined body figure preferences of male and female adolescents. Cohn et al. (1987) decided to examine the developmental roots of body-figure preferences by replicating Fallon and Rozin’s (1985) procedure with a sample of early adolescents. The subjects used included boys and girls in grades 6 through 8. A questionnaire was administered on adolescent health beliefs and behaviors (Adler et al., 1986; Irwin, Millstein, & Adler, 1986). Subjects were shown nine figure drawings of each sex ordered from thin to heavy in appearance (Stunkard, Sorensen, & Shulsinger, 1983) depicting current, ideal, attractive and other attractive figures. Each subject gave responses scored on a 9-point scale and then followed with a 10-item survey assessing general body dissatisfaction as well as comparative judgments of height and weight. Puberty development was assessed by using a self-staging technique consisting of two sets of line drawings, depicting a different level of puberty development (Marshall & Tanner, 1969; 1970). The subjects were interviewed individually by same-sex interviewers who showed them two sets of line drawings. Each set depicted a different aspect of puberty development of genital and breast stages (Morris & Udry, 1980).

The results of Cohn et al. (1987) suggest that many girls develop some bias toward thinness by the time they reach early adolescence. These feelings of thinness appear to be motivated by pressures that extend beyond opposite-sex preferences and considerations.
Girls seem to ignore the body figure preferences of boys, but are aware of the feelings that boys have about female figure preferences. These feelings have also been displayed by high school and college students (Fallon & Rozin, 1985). However, unlike the college students in Fallon and Rozin (1985) study, the early adolescent girl does not perceive herself to be overweight in the eyes of her male counterparts. Nevertheless, early adolescent girls desire to be thinner than their present figure and, more thin than the figure they consider most attractive to boys (Cohn et al., 1987).

Cash and Green (1986) wanted to explore the area of body image by incorporating several measures of body image in their study. Therefore, their study examined relationships between stable body weight and body image in a nonclinical college population. Thirty-six female college students were subjects, 12 of normal weight, 12 underweight, and 12 overweight. Each subject responded to a general weight information questionnaire which assessed affective, cognitive, and behavioral components of appearance-related body image. The Body Image Detection Device (Ruff & Barrios, 1986) was used to assess perceptual and cognitive measures of body image. The subjects also used a caliper to estimate and objectively appraise the width of their bodies (Cash & Green, 1986).

Cash and Green (1986) based their expected results on findings from a variety of clinical studies using a variety of assessment techniques (e.g., Garfinkel & Garner, 1982, for a review of studies). The findings indicated that the perceptual, affective, and cognitive components of body image differed as a function of body weight, but the differences also varied with the measure employed. The size estimations of one’s own body were strongly related to size estimations of another’s body (Cash & Green, 1986). Although the study by Cash and Green (1986) focused on perceptual, cognitive, and affective measures of body image of younger adolescents, their study still sheds some light on a late adolescent woman’s perception of body image, such as overestimation of body
size in underweight subjects with overweight subjects being more critical of their appearance (being dissatisfied and unattractive).

In studies that deal with perceptions of body image in female and male adolescents, it is expected that females will have poorer body images than the males. Richards, Boxer, Petersen and Albrecht (1990) sought to find differences of weight and body image in adolescents from two different communities. Although this study focuses more on the community differences in body image, the study did have some consistent results with similar studies (Blyth et al., 1985; Tobin - Richards et al. 1983). The results concluded that girls suffered from poor body image and were less satisfied with weight than boys. For the girls, the feelings about their perceptions of weight were associated with advanced puberty development which was not true for males (Richards et al., 1990).

A study of body image preferences of male and female adolescents was conducted by Paxton, Wertheim, Gibson, Szmukler, Hillier & Petrovich (1991). This study dealt with dieting beliefs and weight loss behaviors among adolescents. Using high school students as subjects, they found that nearly two-thirds of girls and boys believed being thinner would have an impact on their lives. The majority of the girls believed this would be positive while the majority of boys believed this would be negative (Paxton et al., 1991). The study also found that body dissatisfaction was considerable in adolescence, especially among girls. Fewer girls than boys thought they were a good weight and girls had higher scores than boys on all body dissatisfaction measures used in the study. For many of the girls in this study, negative attitudes and beliefs related to ideal body size seem to be established before high school (Paxton et al., 1991). Because of the negative feelings adolescents associate with their body images, a study is needed which uses a realistic body figure drawing and a self-esteem measure to determine body satisfaction in early adolescents ages 9 to 12 and to study the relationship between body image and self-esteem. The reason for selecting subjects in this age range was to try and capture
early adolescent subjects’ body development at its peak, specifically for early adolescent girls. On average adolescent girls tend to develop earlier than adolescent boys, as much as two years earlier (Elliot & Feldman, 1990). Also studying subjects at a younger age will add to the existing literature on early adolescent body image.

**Theoretical Perspectives**

The theory of social comparison was developed by Leon Festinger (1954). The theory explains how people evaluate themselves by comparison to others in terms of ability and opinion formation. The theory of social comparison provides the theoretical perspective for understanding how people evaluate themselves by comparison with other people in the absence of objective nonsocial criteria (Sears, Freeman & Peplau, 1985). The theory of social comparison was developed to explain why people have a need to evaluate themselves. Festinger thought that people best serve this need for self-evaluation by measuring their attributes against direct, physical standards. The central proposition of social comparison theory is the “similarity hypothesis,” which predicts that individuals prefer to compare themselves with similar others (Wood, 1989). In other words, people compare themselves to people who are most like themselves. Social comparison theory not only deals with how individuals compare to and evaluate themselves with others, but also deals with how individuals evaluate their abilities and performance in comparison to others. For this research the main focus of social comparison theory will be on how individuals evaluate and compare themselves to others especially in terms of their bodies. Physical attractiveness and human value, in recent years, have become the main focus of the theory (Morse & Gergen, 1970; Richins, 1991; Wood, 1989).

Festinger (1954) used various hypothesis, corollaries, and derivations to explain the process of social comparison. Festinger’s (1954) first hypothesis states that “there
exists, in the human organism, a drive to evaluate ones opinions and ones abilities”
(p.117). While opinions and abilities may, at first glance seem to be quite different things,
there is a close functional tie between them (Festinger, 1954). Festinger’s (1954) main
point on social comparison is that opinions are very important because a person’s opinions
about situations and their evaluation of their abilities will together have a bearing on their
behavior (Festinger, 1954).

The second hypothesis stated by Festinger (1954) outlined how people evaluate
their opinions and abilities by comparison, to opinions and abilities of others. Festinger’s
(1954) hypothesis three states that people have a tendency to compare themselves with
others. In hypothesis three, Festinger posited that a person tends not to compare
him/herself to others when a comparison is needed if that person is different (Festinger,
1954). For example, a college student would not compare herself to an elderly woman. A
person would rather choose someone close to his/her own ability and/or life circumstances
for comparison.

Festinger’s social comparison theory rests on the assumption that people have an
urge to evaluate their opinions and abilities. According to Festinger (1954), social
comparisons (a) constitute judgments, (b) possess a common comparative structure, and
(c) possess unique contents that determine the subjective meanings of comparison
outcomes and their psychological implications (Kruglanski & Mayseless, 1990).

Issues raised by social comparison theory concerned the type of comparison others
to which people usually turn for information and the impact that information from different
social sources has on people’s opinions. Kruglanski and Mayseless (1990) found some
irregularities in social comparison theory. The authors argue that the process is essentially
uniform across domains, that the comparison process does not differ across content
domains of comparison. Also there is the issue of the type of comparison others to whom
people normally turn for information and the impact from that information on people’s
opinions. Early social comparison theory research posited that individuals were assumed to show general preferences for information from similar others and to gain greater confidence from the information. Kruglanski and Mayseless (1990) suggest that there is no general tendency to choose or be influenced by similar others. Because social comparison theory rests on the assumption that people possess an eagerness to evaluate their opinions and abilities, it is also important to discuss physical comparisons since it is a major component of how people evaluate others as well (Cash & Butters, 1983; Richins, 1991; Kendrick, Montello, Gutierres, & Trost, 1993).

**Physical Attractiveness and Social Comparison**

Physical attractiveness plays a very important role in many people’s lives, but how does social comparison affect how people perceive physical attractiveness? Research in the area of physical attractiveness has been plentiful (Kendrick, Montello, Gutierres, & Trost, 1993; Miller, 1992; Morse & Gergen, 1970). In a study by Morse and Gergen (1970) it was concluded that the casual exposure of subjects to persons whose appearance conveyed either desirable and undesirable characteristics produced social comparison contrast effects on a persons’ self-esteem. Miller (1982) suggests that physical attractiveness may be a prominent attribute in social comparison. The following section will discuss the connection between physical attractiveness and social comparison.

Kendrick, Montello, Gutierres, and Trost (1993) studied physical appearance as it affects perceptual judgments. The study supports the idea that exposure to attractive people of the same sex might lead to negative rather than positive affect and exposure to an attractive individual of the opposite sex would lead to positive affect, whereas exposure to an attractive person of the same sex, would lead to negative affect. These occur because highly attractive people are more likely than less attractive people to be rejected.
by their peers of the same sex. Krebs and Adinolfi (1975) found that “physical attractiveness is an attribute primarily employed to enhance relations with the opposite sex, who may perceive themselves as in competition with one another” (p. 248). It would not be expected to exert a positive effect on social relations among members of the same sex, who may perceive themselves as in competition with one another. Subjects viewed and rated six facial photos of average attractiveness first, then viewed and rated those photos of the average target. They also rated their own moods. In a second condition the subjects rated their own mood first, then viewed the six average-attractiveness facial photos and finally rated the average target. In the third condition, subjects viewed six attractive photos, rated their own mood, and finally rated the average target. In the fourth condition subjects viewed the six attractive photos, rated the target, and rated their mood last. Eighty females participated in the study (Kendrick et al., 1993).

The materials for this study by Kendrick et al. (1993) were stimulus slides of the facial photos of Caucasian females and males taken from several magazines. The faces were rated on mood and attractiveness. The findings indicate that affective and cognitive responses to physically attractive faces are distinct processes (Kendrick et al., 1993). Thus, comparison to others’ attractiveness can affect a person’s mood about his or her own appearance or physical attractiveness when compared with certain stimuli. Viewing highly attractive faces decreased the apparent attractiveness of an average face whether the raters were of the same sex as the target photos or of the opposite sex. In contrast, the effects of highly attractive faces on mood ratings depends on whether the raters and the photos were of the same or opposite sex. Appearance and attractiveness are factors in how individuals compare and evaluate themselves to others and their self-esteem and opinions of themselves.

What factors influence judgments of attractiveness? Cash et al. (1983) attempted to answer this by assessing the effect of exposure to same-sexed peers of varying levels of
physical attractiveness. The contrast effect prediction was supported for self-perceived attractiveness. The research was based on social comparison theory. The hypothesis was that subjects in the attractive condition were expected to give lower self-evaluations than subjects in the not attractive condition (Cash, Cash & Butters, 1983). The findings from this research indicate that people do affect other people's perceptions of physical attractiveness. Thus, the way people view another's physical attractiveness is taken into consideration when they evaluate themselves.

Other research (Kownar & Ogawa, 1993; Richins, 1991) supports the findings of Cash et al. (1983) and Kendrick et al. (1993). Richins' (1991) reviews theories that might explain how advertising causes dissatisfaction with the self. Richins (1991) hypothesized that consumers compare themselves with ideal advertising images which may change consumers' comparison standards for what they desire for themselves. Richins found that college women compared themselves to women in advertisements. This suggests that idealized images raised comparison standards for one's own attractiveness and lowered satisfaction with one's own attractiveness (Richins, 1991).

Richins (1991) notes that Festinger's theory (1954) did not discuss individual outcomes of the comparison process. However, he did note that feelings of failure can result from comparison with others whose abilities are superior. Richins (1991) also states that the effects of advertising exposure on self-feelings may indeed be temporary with no impact on the consumer of that product. But it is equally possible that exposure to idealized images has a cumulative effect on self-feelings, at least among some consumer segments (Richins, 1991). In particular some consumer groups might be more vulnerable than others (e.g., adolescents or people with low self-esteem).

Kownar and Ogawa (1993) examined judgments of other's attractiveness and self-evaluation among the Japanese. The subjects of this study rated their body satisfaction and self-esteem following exposure to three sets of highly, medium, and low
physical attractiveness stimuli rating all three groups. The authors noted that several studies have been conducted in the field of social comparison in the Japanese culture. This is useful since little empirical research has focused on the relationship of physical attractiveness and social comparison in non-US cultures. They also mentioned that their research was built upon research done in the United States including Cash et al. (1983) and Kendrick and Gutierrez (1980).

The three goals of the Kownar and Ogawa (1993) research were to (1) investigate a possible contrast effect of attractive stimuli on the judgment of others’ attractiveness (2) investigate the effect of attractiveness stimuli on subjects’ self-evaluation, and (3) examine contrast effect of similar versus dissimilar attractive stimuli on the subject’s self-evaluations. There were 337 subjects who participated in the experiment (213 women and 124 men). Kownar and Ogawa (1993) selected 10 sets of 10 black and white pictures, 5 sets of male and 5 sets of female stimuli. The people in the photos ranged in age from 20 to 30 years. Attractiveness varied from high physical attractiveness to a low physical attractiveness. Two measures were used: The State Self-Esteem Scale (Heatherton & Polivy, 1991) and Janis-Field Feeling of Inadequacy Scale (Janis & Field, 1959. The Body-Esteem Scale (Franzoi & Shields, 1984) was used to measure body satisfaction.

Kownar and Ogawa (1993) state in their discussion that the study fulfilled its main goal of comparing physical attractiveness among Japanese subjects. The findings were similar to the results gathered in the Cash et al. (1983) and Kendrick et al. (1993) studies. Kownar and Ogawa (1993) found that Japanese women responded similarly to American subjects. As in the Cash et al. study, the result on body satisfaction with various parts of their bodies was in the expected direction but was often insignificant (Kownar & Ogawa, 1993). A contrast effect was evident for self-perceived attractiveness. In other words, Japanese women also made comparisons to Western-based attractiveness. Thus even
across cultures, comparison to attractive stimuli does have a negative effect on the subjects who view them.

Since Festinger's (1954) theory of social comparison was formulated there has been much significant work related to his theory. Although Festinger's theory did not receive immediate attention, history did eventually have a resurgence. Research on social comparison is the basis of much research used for comparison. Social comparison is very important for determining feelings of relative deprivation. Festinger also discussed the implications of his theory for group formation and societal structure and noted the importance of segmentation in society in protecting us from unwanted comparisons with dissimilar and better-off others (Goethals, 1986).

Social comparison theory will be used to explain the process by which adolescents compare themselves to and evaluate each other. It is a critical issue in adolescent body image that comparisons be made to understand and determine what body types are being accepted (Koff et al., 1990). Social comparison theory will help aid in explaining how adolescents evaluate themselves and each other.

Based on the existing research, these areas that are discussed in this literature review will aid in explaining the objectives mentioned in Chapter 1. The area of adolescent body image was reviewed by discussing the literature in the areas of body image, perceptual and affective measures of body image, body image and self-esteem and adolescence. The current study was undertaken to determine if there is a difference as a function of age on early adolescent body image and self-esteem. Because the body is a source of identity and self-concept, it will also be a factor in determining early adolescent satisfaction with body image. The research available on adolescence that discusses gender, body image, and self-concept is numerous (Koff et al., 1990; Clifford, 1971; Lerner, Karabenick & Stuart, 1976) however, in the present study, the use of a body cathexis grid in the method will be new to early adolescent body image research. The grid
allows for specific body parts to be shaded for satisfaction which will allow for a more detailed analysis of early adolescent body image.

**Developmental Contextualism**

Early adolescents go through obvious puberty body changes which affect their body image such as the increase in height and weight, acquisition of feminine or masculine body shape and development of external genitalia. Because of these new developments, adolescents must form ideas about themselves and the world in which they live. One theory which interprets how early adolescents appraise their own bodies in terms of cognition and feelings about their bodies is developmental contextualism. Developmental contextualism will be used in conjunction with social comparison theory to help explain why adolescents not only use “like others” (in-group others) for comparison but why “unlike others” (out-group others) aid in adolescents’ development of their body image. The context of development is critical to understanding how people think and feel about their bodies and how these feelings will influence their social interactions with peers. Developmental contextualism also describes people’s feelings about their bodies or body images (Lerner & Jovanovic, 1990).

Early adolescence is a period of profound changes and is a stage of physical and cognitive development which can greatly influence an adolescents’ body image and self-concept. Since body image is an important component of early adolescent development, it is necessary to discuss how body image is influenced by variables such as peer relationships. It is necessary to understand why adolescent development is essential to adolescent body image and self-concept. According to Lerner (1985) there are three ways in which an adolescent may affect his/her own development; social interactions may influence each of the three ways of development. The first way is the adolescent as the
stimulus. In other words, an adolescent provides his/her own physical self and/or attitudes for others to judge. Adolescents who differ on physical attractiveness or time of maturity receive different reactions from their peers (Lerner, 1985).

The second way in which adolescents may create their own development is through their ability to adapt to their own surroundings based on their level of maturity. For example, adolescents may not interpret responses to their bodies the same throughout their lives. For example, early matures and late matures of the same age will differ in respect their physical and cognitive abilities.

Behavior is the third way an adolescent may produce his/her own development (Block, 1973). Adolescents’ ability to shape their behavior is the most flexible way in which they influence their development. This behavioral process becomes especially important in early adolescence when behavior in the school and home becomes evident and when rapid body development occurs (Tobin-Richards et al., 1983).

Lerner (1985) initiated a line of research important in adolescent development. The idea was to explore the role of physical development or differences in appearance on a individual’s own personal development. Using Sheldon’s (1940) terms of endomorph (fat or chubby), mesomorph (muscular or average build), and ectomorph (thin or linear), Lerner (1985) conducted a series of studies regarding children’s body types.

In a series of studies (Iwawaki & Lerner, 1974, 1976; Lerner, 1969a, 1969b, 1971; Lerner & Iwawaki, 1975; Lerner & Korn, 1972; Lerner & Pool, 1972; Lerner & Schroeder, 1971a, 1971b) Lerner found that highly positive stereotypes are present in children and adolescents having an average body type while negative stereotypes exist for chubby children and adolescents. For children and adolescents with a thin body build there was somewhat less of an unfavorable stereotype, but still a negative stereotype existed (Lerner, 1985). Lerner also researched how physical attractiveness, body attitudes, and self-concept in male and female adolescents influence their development.
Lerner, Karabenick, and Stuart (1973) conducted a study using 118 male and 190 female college students to determine how they would rate 24 body characteristics. Using three factors (1) how satisfied students were with the features of their bodies; (2) how important each part was in determining how attractive they feel; and (3) how important each body part was in determining opposite sex attraction. Individuals having certain body types are found to have different relationships between self-concept and body attitudes.

Lerner et al. (1973) found that males and females rated the importance of his/her own body type in physical attractiveness and those of the opposite sex consistently the same. They also found that mean satisfaction ratings were significantly related to self-concept among males and females, and that the body part satisfaction was related to self-concept. However, body shape was not found to be related to self-concept in the study.

Since puberty is characterized by acceleration of the rate of growth as well as many of physical changes in a short period of time, there may be inadequate feelings of body image which may influence social interaction. The body image that the individual establishes is not the reflection of the body as it is, but an interpretation of it.

Rodriguez-Tome et al. (1993) presented research on the relationships of puberty changes on the image which both adolescent males and females construct of their bodies and on the relations which they establish with their peers of the opposite sex. By testing variables of maturation and body image of 84 girls and 73 boys ages 11 to 16, Rodriguez-Tome et al., (1993) found that on an average young adolescents show themselves to be rather satisfied with their body in terms of appearance and health. In general, girls have less favorable feelings of their attractiveness than boys, but they do not differ from boys in estimation of their physical condition.

Rodriguez-Tome et al. (1993) also found that when considering the relations
between maturity and body image, that the encounter of the body and the encounter of relations with the opposite sex are not the same for girls and boys during early adolescence. For girls, body image is closely related to their peer relationship and this relationship is not explained by the effects of puberty. Body image (feelings of attractiveness, being “at ease” with the physical self) determines the perceived quality of relationships with the opposite sex (Rodriguez-Tome et al., 1993).

Summary

The theoretical framework of social comparison (Festinger, 1954) and developmental contextualism (Lerner & Jovanovic, 1990) together give a base for understanding early adolescents’ need to compare themselves to like others as well as use feedback from like others to devise a body image for themselves. Research on adolescent body image shows that peer groups are important in the development of adolescent body image (Lerner, 1985; Lerner & Jovanovic, 1990; Rodriguez-Tome et al., 1993, Sorell & Nowak, 1981; Tobin-Richards et al., 1983). The feedback peers provide to another adolescent is used in establishing a body image. The peer group provides the adolescent with references that not only help establish body image but other peer relationships (Rodriguez-Tome et al., 1993).

This study examines early adolescent body image and how self-concept influences that body image. Based on the research, these areas that are discussed in this literature review will aid in explaining the objectives. The research questions were derived from social comparison theory and developmental contextualism. The research will examine the differences in satisfaction with body image by the different grade levels to see how adolescents compare themselves to and evaluate each other. Satisfaction with various body areas in male and female subjects will also be compared to see if male and female subjects differ in respect to the levels of satisfaction held for various body parts, which
may reflect contextual development. Because the body is a source of identity and self-concept, self-esteem will also be a factor in determining early adolescent satisfaction with body image.

The research available on adolescence that discusses gender, body image, and self-concept is plentiful (Clifford, 1971; Cohn et al., 1987; Koff et al., 1990; Lerner et al., 1976; Tobin-Richards et al., 1983). However, the use of a body cathexis grid in the method will be new to this area of research. The literature clearly documents that feelings of body satisfaction or dissatisfaction are in place by adolescence. Peers play an important role in the body image that adolescents develop. There is also literature (Lerner, 1969a, 1969b, 1971) to suggest that children also hold feelings of satisfaction or dissatisfaction about their bodies and these may be influenced by peers. Therefore, since children’s bodies often begin to mature in late childhood and early adolescence, it would be beneficial to study body image among children ages 9 to 12. Such a study will expand on existing literature about body image development in early adolescents.
CHAPTER 3

METHOD

Subjects

Sixty-two African American female and male elementary and junior high school students, from five public schools in the Columbus, Ohio area, participated in this study. The subjects were recruited from an after school program. The ages of the subjects ranged from nine to twelve years of age with a mean age of 10.8. There were 37 female and 25 males who received parental consent to participate in the study. Prior to the study, care was taken to inform the parents of the study, to assure confidentiality of results, and to obtain their consent to allow their child to participate in the study. Information concerning the study and a consent form was sent home with the subjects for parent or guardian permission to participate. The oral instructions and consent form are included in the Appendix section. The study procedure and questionnaire was approved by the Human Subjects Review Board given approval number 97B0948 (see Appendix).

The early adolescents in the current study were African Americans who tend to report a higher satisfaction with their bodies than Caucasian early adolescents. Lawrence and Thelen (1995) conducted a study on third and sixth grade African American and Caucasian subjects about their diets, body image, and self-concept. The study found that Caucasian girls reported stronger dieting behaviors than Caucasian boys, and African American boys and girls. Caucasian subjects on a whole were more concerned about their
weight and desired a body size that was thinner than their current body size, whereas African American subjects desired a larger body figure.

The study also found that only Caucasian girls demonstrated a negative association between diet behaviors and physical appearance. For both male and female African Americans, there was no relationship between their weight concerns and appearance. Lawrence and Thelen (1995) suggest that this result may be due to the different messages that African American subjects receive from significant others such as their parents.

Another study on race differences in relation to diet and body image found similar results. Simmons and Rosenberg (1975) looked at sex differences between Caucasian and African American early adolescents. They found that Caucasian girls were less satisfied with their body image than Caucasian boys. For African Americans, however, there were no significant differences between boys and girls regardless of age in their satisfaction with their appearance.

**Procedures**

Over a two-week period subjects were recruited to participate in this study. The investigator went to an after-school program in two community center to ask students to participate. In a classroom setting subjects completed a questionnaire and a body cathexis grid for their sex. Tasks were completed in groups of 3 to 12 subjects. The entire procedure took approximately fifteen minutes to complete. The questionnaire was completed first and then the body grid was color coded. Some of the questions from the questionnaire were read aloud for the students to ensure that they were understood.
Measures

The questionnaire utilized in this study included ten items on self-esteem taken from Rosenberg's (1965) Self-Esteem Scale. The scale is widely regarded as a measure of self-esteem and found to be reliable (Koff et al., 1990) and valid (Demo, 1985; Wells & Markwell, 1976) for young adolescents. The ten-items were rated on a 5 point scale from 1- strongly disagree to 5- strongly agree instead of a 4-point scale as Rosenberg's scale originally was designed. This was to give students a neutral point on the scale.

Body image satisfaction was determined using two different body catheysis grids, one for male and one for female body forms. The grid was adapted (not using adult body figures) from a similar grid used by Rudd, Sloan, and Tuggle, (1993) which was originally taken from Horn (1968). Although reliability and validity was not determined specifically for this measure, similar body image instruments have been found reliable and valid (Wooley, 1985).

The grid consists of a 6 1/2 head- length mesomorphic figure considered as representing an average early adolescent figure showing a front and a side body view. This resulted in a 42 cell “body grid,” consisting of two images: the front view has 6 1/2 vertical and 4 horizontal cells for the male and female; the side view has 6 1/2 vertical and 2 horizontal cells for the male and female. Subjects were asked to shade in the precise areas of satisfaction or dissatisfaction using 5 colors ranging from blue- very satisfied, to red- very dissatisfied and white - neutral. Two trained raters evaluated the shaded grids to determine specific areas of body dissatisfaction from both front and side views. Disagreements were negotiated between the two raters when there were significant differences in scores of body parts. The Self-esteem Questionnaire and Body Grids are located in the Appendix.

Since the subjects in the study were young, some of the questions and concepts of
the self-esteem measure had to be explained in detail to subjects. Therefore, it is recommended that either the wording of the measure be changed to age appropriate language or the use of another self-esteem scale such as the Piers-Harris Self-Concept Scale (Piers, 1984).

**Data Analysis**

The data analysis used for this study consists of one-way analyses of variance (ANOVA). ANOVA was used because it permits the simultaneous comparison of two or more means to determine if there are any statistically significant differences between them. Means and standard deviations for several variables were examined. ANOVA was used to determine if a significant relationship exist between overall satisfaction on age, sex, and self-esteem.

The data was compiled on a coding sheet and entered on a word processing program. The Statistical Package for the Social Sciences /SPSS (Touliatos & Compton, 1988) was used to process the statistical information. The results of this study were summed because the body grid measure has numerous body parts that were grouped into four major categories. The categories of body parts include: facial consisting of entire head, hair, forehead, eyes, nose, mouth, teeth, ears, eyebrows, jaw, and neck; upper torso consisting of shoulder, chest/breast, back, upper stomach, and waist; lower torso consisting of derriere, hips, and lower stomach; and limbs consisting of upper arm, lower arm, hands, fingers, thigh (lower, upper, inner, outer and back), knee, calf, ankle, feet, and toe.
CHAPTER 4

RESULTS

The purpose of this study was to determine the body areas with which early adolescent male and females are satisfied and dissatisfied. By using male and female subjects ages 9 to 12, the following research questions were tested: 1) is there a difference in satisfaction with body image among early adolescents (nine to twelve-years old) subjects?, 2) do male and female subjects differ with respect to the levels of satisfaction held for various body parts? (upper torso, lower torso, face, and limbs), 3) is there a relationship between early adolescent body satisfaction and self-esteem? In this chapter the results of the testing of these research questions are presented.

Testing of Research Questions

The relationship between the data analyses and the four research questions around which the study was designed will be discussed in this section. The underlying assumption of the research questions is that subjects will have different feelings toward their bodies depending on their age, sex, and self-esteem development. The research questions which were stated earlier in this chapter will also be discussed.

The possible range of mean scores for each question on the Self-Esteem Scale (Rosenberg, 1965) was (1) disagree strongly to (5) agree strongly were reversed scored, so the lower mean score indicates greater satisfaction and the higher mean scores indicates
low satisfaction. Body image was measured using the body image grid. The body image grid was scored from (1) very satisfied to (5) very dissatisfied with the low scores indicating higher satisfaction and higher scores indicating low satisfaction among body areas.

**Demographic Information**

The subjects in the study consisted of 62 male and female adolescents. Males (N = 25) comprised 40.3 percent of the population. Females (N = 37) comprised 59.7 percent of the studied population.

The sample was comprised of 14.5 percent nine-year-olds, 24.2 percent ten-year-olds, 30.6 percent eleven-year-olds, and 30.6 percent twelve-year-olds. The mean age of the subjects was 10.77 years with the range of ages being 9 to 12 years. Standard deviation for the ages was calculated as 1.047 (Table 1).

**Table 1**

**Demographic Age**

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>10.77</td>
<td>1.047</td>
</tr>
</tbody>
</table>
Subjects rated 39 body parts that were grouped into four categories consisting of (1) face; (2) upper torso; (3) lower torso; and (4) limbs. The 42 cells included the 39 body parts as well as three blank cells where the body figure did not touch. Each body part was given a value from (1) very satisfied to (5) very dissatisfied. These values were used to generate means and standard deviations for each body part (Tables 2-5). Results indicate that subjects were, on average, satisfied with the face (mean of 2.44 to 2.60), satisfied to neutral on the upper torso (mean of 2.47 to 3.18), satisfied to neutral on the lower torso (mean of 2.27 to 3.32), and satisfied with limbs (mean of 2.06 to 2.94).
Table 2

**Body Category: Face**

<table>
<thead>
<tr>
<th>Body Parts</th>
<th>M</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head</td>
<td>2.44</td>
<td>1.13</td>
</tr>
<tr>
<td>Face</td>
<td>2.44</td>
<td>1.13</td>
</tr>
<tr>
<td>Mouth</td>
<td>2.44</td>
<td>1.14</td>
</tr>
<tr>
<td>Fore Head</td>
<td>2.47</td>
<td>1.14</td>
</tr>
<tr>
<td>Jaw</td>
<td>2.45</td>
<td>1.16</td>
</tr>
<tr>
<td>Eyes</td>
<td>2.52</td>
<td>1.17</td>
</tr>
<tr>
<td>Nose</td>
<td>2.58</td>
<td>1.21</td>
</tr>
<tr>
<td>Brow</td>
<td>2.47</td>
<td>1.14</td>
</tr>
<tr>
<td>Teeth</td>
<td>2.44</td>
<td>1.14</td>
</tr>
<tr>
<td>Ears</td>
<td>2.50</td>
<td>1.14</td>
</tr>
<tr>
<td>Hair</td>
<td>2.60</td>
<td>1.31</td>
</tr>
<tr>
<td>Chin</td>
<td>2.44</td>
<td>1.14</td>
</tr>
</tbody>
</table>
### Table 3
**Body Category: Upper Torso**

<table>
<thead>
<tr>
<th>Body Parts</th>
<th>M</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neck</td>
<td>2.53</td>
<td>1.32</td>
</tr>
<tr>
<td>Shoulder</td>
<td>2.47</td>
<td>1.32</td>
</tr>
<tr>
<td>Chest</td>
<td>3.18</td>
<td>1.58</td>
</tr>
<tr>
<td>Upper Stomach</td>
<td>3.09</td>
<td>1.42</td>
</tr>
</tbody>
</table>

### Table 4
**Body Category: Lower Torso**

<table>
<thead>
<tr>
<th>Body Parts</th>
<th>M</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waist</td>
<td>3.21</td>
<td>1.45</td>
</tr>
<tr>
<td>Midsection</td>
<td>3.15</td>
<td>1.46</td>
</tr>
<tr>
<td>Lower Stomach</td>
<td>3.32</td>
<td>1.47</td>
</tr>
<tr>
<td>Stomach</td>
<td>3.07</td>
<td>1.48</td>
</tr>
<tr>
<td>Derriere</td>
<td>2.86</td>
<td>1.47</td>
</tr>
<tr>
<td>Back</td>
<td>2.27</td>
<td>1.22</td>
</tr>
<tr>
<td>Hips</td>
<td>2.94</td>
<td>1.38</td>
</tr>
<tr>
<td>Body Parts</td>
<td>M</td>
<td>S.D.</td>
</tr>
<tr>
<td>--------------</td>
<td>----</td>
<td>-----</td>
</tr>
<tr>
<td>Upper Arm</td>
<td>2.17</td>
<td>0.97</td>
</tr>
<tr>
<td>Lower Arm</td>
<td>2.08</td>
<td>0.84</td>
</tr>
<tr>
<td>Hand</td>
<td>2.03</td>
<td>0.75</td>
</tr>
<tr>
<td>Fingers</td>
<td>2.08</td>
<td>0.84</td>
</tr>
<tr>
<td>Elbow</td>
<td>2.24</td>
<td>1.02</td>
</tr>
<tr>
<td>Thigh</td>
<td>2.74</td>
<td>1.25</td>
</tr>
<tr>
<td>Otter Thigh</td>
<td>2.94</td>
<td>1.32</td>
</tr>
<tr>
<td>Inner Thigh</td>
<td>2.81</td>
<td>1.25</td>
</tr>
<tr>
<td>Back Thigh</td>
<td>2.53</td>
<td>1.17</td>
</tr>
<tr>
<td>Upper Thigh</td>
<td>2.71</td>
<td>1.18</td>
</tr>
<tr>
<td>Lower Thigh</td>
<td>2.45</td>
<td>1.08</td>
</tr>
<tr>
<td>Knee</td>
<td>2.45</td>
<td>1.08</td>
</tr>
<tr>
<td>Calves</td>
<td>2.24</td>
<td>0.95</td>
</tr>
<tr>
<td>Ankles</td>
<td>2.06</td>
<td>0.74</td>
</tr>
<tr>
<td>Feet</td>
<td>2.15</td>
<td>0.74</td>
</tr>
<tr>
<td>Toes</td>
<td>2.16</td>
<td>0.77</td>
</tr>
</tbody>
</table>
A one-way ANOVA with age as the independent variable and body image satisfaction as the dependent variable was used to address research question one. The one-way ANOVA revealed that there was no significant effect of age on body image satisfaction with the five major body categories of limbs, face, upper torso, lower torso, and overall satisfaction. Thus, age in this study made little difference in how satisfied the students were. Table 6 shows the mean scores and standard deviations for each age. A mean score was considered significant if it had \( F > 3.0 \). There were no significant effects for age on overall satisfaction \( [F (3, 58) = 1.18, p = .431] \), satisfaction with face \( [F (3, 58) = .342, p = .795] \), satisfaction with upper torso \( [F (3, 58) = 1.89, p = .140] \), satisfaction with lower torso \( [F (3, 58) = .571, p = .636] \), or satisfaction with limbs \( [F (3,58) = .932, p = .431] \).
<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Limbs</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>19.56</td>
</tr>
<tr>
<td>S.D.</td>
<td>(1.74)</td>
</tr>
<tr>
<td>Upper Torso</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>13.22</td>
</tr>
<tr>
<td>S.D.</td>
<td>(4.21)</td>
</tr>
<tr>
<td>Lower Torso</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>16.44</td>
</tr>
<tr>
<td>S.D.</td>
<td>(4.88)</td>
</tr>
<tr>
<td>Face</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>31.33</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>123.0</td>
</tr>
<tr>
<td>S.D.</td>
<td>(24.88)</td>
</tr>
</tbody>
</table>
Research question two asks, will male and female subjects differ with respect to the levels of satisfaction held for various body parts (upper torso, lower torso, limbs, and face)? One-way ANOVAs with sex as the independent variable and body satisfaction as the dependent variable were used to address research question three. The ANOVAs revealed that there were no significant differences on overall satisfaction with body parts by sex on face, upper torso, and limbs (Table 7). However, for lower torso consisting of the body parts derriere, lower stomach, and hips, the ANOVA revealed that there was a significant difference on body satisfaction by sex \[ F(3, 58) = 3.95, p = .051 \]. The p figure was rounded down to .05 to show a significance on body satisfaction by sex. The mean satisfaction for lower torso for males was 13.44 and for females 16.16. Overall, subjects do not differ with respect to the number of body areas with which they are satisfied or dissatisfied, since they only differed on satisfaction with lower torso.
Table 7

**Summed Means and Standard Deviations for Satisfaction by Sex**

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limbs</td>
<td>22.56 *</td>
<td>21.08</td>
</tr>
<tr>
<td>S.D.</td>
<td>(6.16)</td>
<td>(3.85)</td>
</tr>
<tr>
<td>Upper Torso</td>
<td>11.24</td>
<td>10.78</td>
</tr>
<tr>
<td>S.D.</td>
<td>(4.75)</td>
<td>(3.65)</td>
</tr>
<tr>
<td>Lower Torso</td>
<td>13.44</td>
<td>16.16</td>
</tr>
<tr>
<td>S.D.</td>
<td>(5.16)</td>
<td>(5.37)</td>
</tr>
<tr>
<td>Face</td>
<td>27.24</td>
<td>31.43</td>
</tr>
<tr>
<td>S.D.</td>
<td>(12.17)</td>
<td>(12.80)</td>
</tr>
<tr>
<td>Overall</td>
<td>113.04</td>
<td>121.35</td>
</tr>
<tr>
<td>S.D.</td>
<td>(31.70)</td>
<td>(30.20)</td>
</tr>
</tbody>
</table>

*Note: * higher numbers reflect less satisfaction
The third research question asks if a relationship exists between early adolescents’ body image and self-esteem? Scores on self-esteem ranged from 16 to 47. Using a median split (Med. = 34) on self-esteem scores, subjects were divided into two groups (low and high). One way ANOVAS with self-esteem as the independent variable and satisfaction with the four body categories and the overall category as the dependent variable were used to address research question three. ANOVA revealed a significant relationship between overall satisfaction and self-esteem \( F(3,58) = 3.85, p = .05 \) and facial satisfaction and self-esteem \( F(3,58) = 4.92, p = .03 \). The summed mean for overall satisfaction was 110.0 for those with high self-esteem and 126.5 for those with low self-esteem. The mean for facial satisfaction was 26.41 for high self-esteem and 33.30 for low self-esteem. The summed means and standard deviations for satisfaction by self-esteem are shown on Table 8. ANOVA found that there was no significant relationship between early adolescent body image in those with high versus low self-esteem with respect to the body categories of limbs, upper torso, and lower torso.
Table 8

*Summed Means and Standard Deviations for Satisfaction by Self-Esteem*

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Limbs</td>
<td>M 21.16</td>
<td>22.24</td>
</tr>
<tr>
<td></td>
<td>S.D. (4.89)</td>
<td>(4.97)</td>
</tr>
<tr>
<td>Upper Torso</td>
<td>M 10.81</td>
<td>11.13</td>
</tr>
<tr>
<td></td>
<td>S.D. (3.83)</td>
<td>(4.43)</td>
</tr>
<tr>
<td>Lower Torso</td>
<td>M 14.94</td>
<td>15.20</td>
</tr>
<tr>
<td></td>
<td>S.D. (4.79)</td>
<td>(6.09)</td>
</tr>
<tr>
<td>Face</td>
<td>M 26.41</td>
<td>33.30</td>
</tr>
<tr>
<td></td>
<td>S.D. (10.18)</td>
<td>(14.10)</td>
</tr>
<tr>
<td>Overall</td>
<td>M 110.0</td>
<td>126.53</td>
</tr>
<tr>
<td></td>
<td>S.D. (25.47)</td>
<td>(34.05)</td>
</tr>
</tbody>
</table>

*Note:* * higher numbers means less satisfaction
CHAPTER 5

SUMMARY

The purpose of this study was to determine the body areas with which early adolescent males and females are satisfied and dissatisfied. The study had two objectives: (1) to compare early adolescent male and female subjects across ages 9 to 12 on satisfaction with body parts and self-esteem and; (2) To compare male and female subjects’ ratings of specific body parts.

Festinger’s (1954) theory of social comparison and Lerner and Jovonovic’s (1990) developmental cotextualism formed the theoretical foundation for this study. The term social comparison refers to how people evaluate themselves by comparison with other people in the absence of objective nonsocial images (Sears, Freeman, & Peplace, 1985). The central proposition of social comparison theory is the “similarity hypothesis,” which predicts that individuals prefer to compare themselves with similar others (Wood, 1989). Social comparison theory not only deals with how individuals compare to and evaluate themselves in relation to others, but also deals with how individuals evaluate their abilities and performance in comparison to others.

An important part of an adolescent’s physical self is his/her satisfaction or dissatisfaction with various features of their own bodies. As an adolescent learns to pay attention to his/her physical and psychological changes that occurs he/she also begins to compare himself/herself to similar others. Early adolescence is also a period in which individuals begin to appraise their bodies in terms of feelings and how they evaluate or
compare themselves to peers.

Social comparison may play a role in the development of body image. This suggests that a person looks outside of his/her reference group for comparison. Miller (1982) suggest that physical attractiveness may be a prominent attribute in social comparison. Another related component of early adolescent body image is how that image is developed. Developmental contextualism explains how adolescents appraise their bodies and how their peers influence that appraisal. Research has shown that people who have favorable opinion of their bodies have a higher self-esteem compared to those with a low body image satisfaction (Lerner et al., 1976; Rosen & Ross, 1968; Secord & Jourard, 1953).

**Rationale and Purpose**

Since body image is the picture we form in our minds about our bodies, it is important to focus on early adolescent body image because it is the time in which most people’s attitudes about their bodies are formed (Fallon, 1990). While there is much research on early adolescent body image and self-concept, research is still needed which focuses on what specific body parts have an influence on body image satisfaction. Also, there is a need for a more realistic body image measure, which uses realistic figures that adolescent subjects can relate to their own bodies.

Research on adolescent body image and self-concept builds on the fact that adolescent self-concept is grounded in body image (Koff & Rierdan, 1990). Early adolescent body image research usually will hypothesize that females will have a more dissatisfied self-concept and body image than their male counterparts (Clifford, 1971; Tobin-Richards et al., 1983; Fallon & Rozin, 1985; Simmons & Blyth, 1987). However, much of the research on body image and self-concept in adolescents does not use a
well-designed affective body image measure that will specifically target body parts that influence body image and self-esteem, nor does it focus on the age group of early adolescence when many children begin to go through puberty. Therefore, this study was conducted to examine the body parts with which early adolescent male and females ages 9 to 12 are satisfied and how their self-concept is influenced by this satisfaction.

**Summary of Findings**

Because body image is the picture we form in our minds about our body, this study attempted to determine if age, gender, and self-esteem were related to that image. The present study utilized three research questions to help fulfill the objectives of the study.

Research question 1 states: Is there an age difference in satisfaction with body image among early adolescent subjects (ages 9- to 12-years-old)? A one-way ANOVA with age as the independent variable and body image satisfaction as the dependent variable was used to address this research question. The analysis of variance revealed that there was not a significant relationship between age and body image satisfaction among adolescents ages 9- to 12-years-old. This finding is not consistent with the research done by Folk et al. (1993) which found that between third- and sixth-grade girls, the third-grade girls were more satisfied overall than sixth-grade girls. Sixth-grade boys were also more dissatisfied with their bodies than third-grade boys. However, the findings for research question 1 were consistent with Clifford (1971) who found no correlation between measures of body satisfaction and age. Clifford (1971) also found that height, weight, and physique may be a concern for all adolescents during puberty regardless of where they are in that process.

Research question 2 states: Do male and female subjects differ with respect to the
levels of satisfaction held for various body parts? The one-way ANOVAs with sex as the independent variable and body satisfaction as the dependent variable was used to address this question. The analyses of variance revealed that there were no significant differences by sex on overall satisfaction with body parts for face, upper torso, and limbs. There was a significant relationship for sex on satisfaction with on lower torso. The lower torso consists of hips, midsection, stomach, waist, lower stomach, derriere, and back. These results are consistent with other research (Clifford, 1971; Koff et al. 1990; Rauste-von Wright, 1989). On the five dimensions of height, weight, bust, waist, and hips, the females in Clifford’s (1971) study were relatively more dissatisfied than males. However, the males in Clifford’s (1971) study had similar dissatisfaction on the five dimensions of height, weight, bust, waist, and hips.

Even though height and weight were not included in the body image measure for this study, waist, and hips were included in the body category of lower torso for this study. The findings that greater dissatisfaction among both male and female subjects existed for lower torso may be linked to the concerns with weight gain in this area of the body. It is a concern because as adolescents begin puberty, a tendency to gain weight in the lower torso region is more evident than in other body areas.

Research question 3 states: Is there a relationship between early adolescent body image and self-esteem? The one-way ANOVAs with self-esteem as the independent variable and satisfaction with the four body categories and overall satisfaction as the dependent variables were used to address this question. The ANOVAs revealed that there was a significant relationship between overall satisfaction and level of self-esteem and facial satisfaction and self-esteem.

Research shows that adolescent body image satisfaction and self-esteem are related because of physical development in the body (Erikson, 1986; Folk et al., 1993; Koff et al., 1990; Koff & Rierdan, 1993; Rauste-von Wright, 1989). However, these research studies
found that male adolescents had higher levels of self-esteem than female adolescents in relation to body image. The significance between facial satisfaction and self-esteem could be attributed to an early adolescent’s physical changes in the face area such as hormonal effects of hair growth, skin irritations (pimples, skin texture), and the growing awareness and sensitivity to the face as a major source of physical attractiveness. However, there was an inability to find research to support the relationship between facial satisfaction and self-esteem.

**Implications**

There are several implications that arise from the findings of this study. The first implication is that early adolescent’s ages 9 to 12 years-old do not differ in their levels of satisfaction with body image. Early adolescents are concerned with certain body parts at this age; however, because the subjects were in the very early stages of puberty development, a significant change may not have been seen. Therefore, age had no effect on how satisfied the subjects were. This finding is important because it shows that male and female adolescents ages 9 to 12 years-old have similar satisfaction with their body image. This finding suggests that their preoccupation with body image remains constant over the four year age span of the subjects in this study. It is suggested that a broader age span should be used in future research examining early adolescent body image and self-esteem.

Another implication deals with early adolescent’s level of satisfaction held for various body parts. From this study there was only one main body category of concern for early adolescents. The body parts of the lower torso consisting of waist, midsection, lower stomach, stomach, derriere, back and hips were significant to both male and female students. This finding is important because it gives an idea of what body parts are
important in puberty development in early adolescence.

Identifying which body parts early adolescents are more dissatisfied with can help future research on puberty development. Stress resulting from body image during adolescence can lead to hazardous behaviors such as anorexia and bulimia. It is important that adolescents receive reinforcement about having and developing a positive body image and self-esteem. By learning what body parts are of major importance in the early stages of puberty, negative body attitudes and behaviors such as eating disorders may be prevented. Such information can be utilized by educators and researchers in the field of adolescent body image and development to help reinforce and educate adolescents on how to build and keep a positive body image. This will also help adolescents develop a healthy self-esteem since research has shown that self-esteem is related to having a good body image (Lerner, 1985).

The final implication comes out of research question three. A significant relationship was found between facial satisfaction and self-esteem. Research on the development of facial changes such as hair growth and pimples and their effect during puberty on self-esteem should be investigated. Much of the research on early adolescent body image and self-esteem does not enter into the effects that facial changes may have during puberty. The lower torso may be an area of concern for satisfaction among specific body parts, but facial satisfaction and overall satisfaction is more important for self-esteem. This may be due to the feelings of attractiveness as the face undergoes change.

**Recommendations**

The recommendations for this study have applications for the field of early
adolescent body image. It is recommended that research takes into account that affective body image measures need to be realistic representations of the body and present images with which subjects can identify. Although the validity and reliability of affective measures of body image have been established (Cardone & Olson, 1973), they are only effective when used properly in research. The body cathexis grid used for the current research utilized realistic figures of age appropriate models of the male and female body. It is believed that this body cathexis grid can provide a more useful measure for body image research once the validity and reliability has been established. The body cathexis grid should also represent figures that look like the subjects. Therefore, the body cathexis grid should have represented the African American subjects used in this study such as the hair and facial features represented.

It is also recommended that the age at which puberty occurs be taken into consideration. A study using a broader range of subjects in age may be necessary to determine the effects of body image on early adolescent self-esteem. For example, a study could provide stronger results by using subjects ages 9 to 14 years-old. It is also recommended that weight and height be included in the instrument to check subjects’ accuracy in self-ratings.

Another aspect of the present study is the depth of the self-esteem measure. It is suggested that the measure be more detailed to include questions on how peer influences can effect body image perception. However, the length of the questionnaire should remain as brief as possible in order not to fatigue younger subjects. I would also suggest that some open-ended questions be included to determine how satisfied subjects are with their bodies, such as asking subjects to choose a body part they would most want to change if given the opportunity. Also knowing the overall satisfaction of the subjects with their bodies will help explain results of the study. It would also be beneficial to add questions that take a global approach, such as asking about satisfaction with skin color, facial
features, and hair texture.

Other recommendations would include taking a photograph of each subject to compare their actual body size to their responses to the body cathexis grid. This would allow for a comparison of the subjects' actual bodies with their colored body grids to see how accurate or distorted the subjects' body satisfaction is.

One final recommendation is to collect data concerning media influence on early adolescent body image. Such data will be helpful in determining what influence magazines, television, music and movies have on what subjects use to aid in their body image formation.
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Lennon, S., & Rudd, N.A. (1994). Linkages between attitudes toward gender roles, body
satisfaction, self-esteem, and appearance management behaviors in women. 


Consent For Participation In
Social and Behavioral Research

I consent to my child’s participating in research entitled:

The Effects of Self-Esteem on Early Adolescent Body Image

Dr. Sharron Lennon or her representative has explained the purpose of the study, the procedure to be followed, and the expected duration of my child’s participation. Possible benefits of the study have been described as have alternative procedures, if such procedures are applicable and available.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Also, I understand that my child is free to withdraw consent at any time and to discontinue participation in the study without prejudice to my child.

Finally, I acknowledge that I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: ___________________________ Signed: ___________________________

Signed: _________________________ (Principal Investigator or her Authorized Representative)

(Person Authorized to Consent for Participant)

HS-027
Oral Script

Introduction:

I am conducting a study on early adolescent body image and I need boys and girls age nine to twelve to participate. The study is simple to complete and will only take fifteen minutes of your time. If your consent form has been signed by a parent or guardian then you may participate in this research study. This is a voluntary study and you may withdraw at any point without penalty. You will still receive the school supplies even if you decide not to finish the study.

Instructions:

Each of you will receive a two page document with a blank page on top to shield your responses. You will also receive four crayons or color markers to use with the empty body grid and a pencil to complete the self-concept questionnaire. You need to complete both pages.

On the body grid, please use the appropriate color to shade in the area or areas of your body with which you are satisfied or dissatisfied. For example if you are very satisfied with your hands then you will shade it blue for very satisfied, but if you do not like your hands at all then shade them red for very dissatisfied. Green will be for satisfied meaning you like your hands somewhat and yellow will be the color to use if dislike your hands. Any part of the body left white will be considered neutral. If you need additional assistance a color coded chart of the choices you can select will be placed on the wall or board to help you.

The next page is a short questionnaire to determine how you feel about your self as a person. Complete each question by placing a 1 to disagree strongly, 2 to disagree, 3 for neutral, 4 to agree, and 5 to agree strongly.

The information received from this study will be used toward the completion of a master’s thesis on early adolescent body image. The body grid and questionnaire will be reviewed by myself and my adviser who is a co-investigator and the statistical scores of your answers will be locked for security and kept confidential.

Now, are there any questions about any part of the instructions or forms you have been given? If you are uncertain about a body part or any words or questions on the questionnaire, please feel free to come forward and ask me.

Thank you for your participation
March 1, 1998

Dear parent or guardian:

Adolescent body image is a topic of study that is important because it is a central part of how people perceive themselves. How well body image is developed may influence adolescents’ feelings about themselves and their bodies. It is important that an adolescent develop a healthy self esteem and body image as early as possible to avoid unhealthy practices such as anorexia nervosa or bulimia. Research is being conducted by Charlette Tuggle as part of fulfillment for a Master of Science degree in Consumer and Textile Sciences from The Ohio State University. The research is interested in determining early adolescent body image satisfaction and how adolescents feelings about themselves may affect body image.

The following pages contain a body image grid to be shaded by levels of satisfaction and a short questionnaire that your child/children will complete on how they might feel about themselves. The whole process will take no longer than fifteen minutes for each child to complete. Your child may withdraw from this study at any time without penalty.

The answers to your child/children’s questionnaire and shaded body image grid will be confidential and will only be seen by the principal investigator and faculty advisors to the investigator from The Ohio State University department of Consumer and Textile Sciences.

Included is a copy of the questionnaire and the oral instructions your child/children will receive. Also a consent form which must be signed by a parent or guardian is included. Your child/children may not participate unless the form has been signed for permission to complete the two part study. Thank you for your participation.

Sincerely,

Sharron J. Lennon, Ph.D.

Charlette D. Tuggle
### Table A

**Means and Standard Deviations for Self-Esteem Questions**

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>S.D.</th>
</tr>
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<tbody>
<tr>
<td>SE1</td>
<td>3.40</td>
<td>1.07</td>
</tr>
<tr>
<td>SE2</td>
<td>3.16</td>
<td>0.995</td>
</tr>
<tr>
<td>SE3</td>
<td>3.82</td>
<td>0.713</td>
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<tr>
<td>SE4</td>
<td>3.69</td>
<td>0.822</td>
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<tr>
<td>SE5</td>
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<td>1.20</td>
</tr>
<tr>
<td>SE6</td>
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<td>0.867</td>
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<td>SE7</td>
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<td>1.04</td>
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<tr>
<td>SE8</td>
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<td>1.18</td>
</tr>
<tr>
<td>SE9</td>
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<td>1.08</td>
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<tr>
<td>SE10</td>
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</table>
**Table B**

Mean and Standard Deviation for Satisfaction with Body Parts

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<thead>
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<tbody>
<tr>
<td>Head</td>
<td>2.44</td>
<td>1.12</td>
</tr>
<tr>
<td>Face</td>
<td>2.44</td>
<td>1.12</td>
</tr>
<tr>
<td>Mouth</td>
<td>2.44</td>
<td>1.14</td>
</tr>
<tr>
<td>Forehead</td>
<td>2.47</td>
<td>1.14</td>
</tr>
<tr>
<td>Jaw</td>
<td>2.45</td>
<td>1.15</td>
</tr>
<tr>
<td>Eyes</td>
<td>2.52</td>
<td>1.17</td>
</tr>
<tr>
<td>Nose</td>
<td>2.58</td>
<td>1.21</td>
</tr>
<tr>
<td>Brow</td>
<td>2.47</td>
<td>1.14</td>
</tr>
<tr>
<td>Teeth</td>
<td>2.44</td>
<td>1.14</td>
</tr>
<tr>
<td>Ears</td>
<td>2.50</td>
<td>1.14</td>
</tr>
<tr>
<td>Hair</td>
<td>2.60</td>
<td>1.31</td>
</tr>
<tr>
<td>Chin</td>
<td>2.44</td>
<td>1.14</td>
</tr>
<tr>
<td>Neck</td>
<td>2.53</td>
<td>1.32</td>
</tr>
<tr>
<td>Shoulders</td>
<td>2.47</td>
<td>1.32</td>
</tr>
<tr>
<td>Chest</td>
<td>3.18</td>
<td>1.58</td>
</tr>
<tr>
<td>Upper Arm</td>
<td>2.17</td>
<td>.967</td>
</tr>
<tr>
<td>Lower Arm</td>
<td>2.08</td>
<td>.836</td>
</tr>
<tr>
<td>Hand</td>
<td>2.03</td>
<td>.746</td>
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<tr>
<td></td>
<td>2.08</td>
<td>.836</td>
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<tr>
<td>-------</td>
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<tr>
<td>Fingers</td>
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**Table C**

**Means and Standard Deviations for Satisfaction with Body Parts (cont.)**

<table>
<thead>
<tr>
<th>Location</th>
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<tr>
<td>Waist</td>
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</tr>
<tr>
<td>Midsection</td>
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<td>1.45</td>
</tr>
<tr>
<td>Thigh</td>
<td>2.74</td>
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</tr>
<tr>
<td>Outer Thigh</td>
<td>2.93</td>
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</tr>
<tr>
<td>Inner Thigh</td>
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<tr>
<td>Back of Thigh</td>
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<td>1.17</td>
</tr>
<tr>
<td>Upper Thigh</td>
<td>2.71</td>
<td>1.18</td>
</tr>
<tr>
<td>Lower Thigh</td>
<td>2.45</td>
<td>1.08</td>
</tr>
<tr>
<td>Hips</td>
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<td>1.38</td>
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<tr>
<td>Lower Stomach</td>
<td>3.32</td>
<td>1.47</td>
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<td>Stomach</td>
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<td>Derriere</td>
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<td>1.47</td>
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<tr>
<td>Knee</td>
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<td>1.08</td>
</tr>
<tr>
<td>Calves</td>
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<td>.953</td>
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<tr>
<td>Ankles</td>
<td>2.06</td>
<td>.744</td>
</tr>
<tr>
<td>Feet</td>
<td>2.14</td>
<td>.743</td>
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<td>Back</td>
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<td>1.22</td>
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<td>Toes</td>
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<td>.772</td>
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</tbody>
</table>
### Table D

#### ANOVAs for Self-Esteem on Overall Satisfaction

<table>
<thead>
<tr>
<th>Source</th>
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<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F Value</th>
<th>Pr&gt;F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Esteem</td>
<td>1</td>
<td>1636.71</td>
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<td>.05</td>
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#### ANOVA for Self-Esteem on Facial Satisfaction

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<th>Source</th>
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<th>Pr&gt;F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face Sates.</td>
<td>1</td>
<td>735.85</td>
<td>735.85</td>
<td>4.92</td>
<td>.03</td>
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</table>

#### ANOVA for Self-Esteem on Upper Torso

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F Value</th>
<th>Pr&gt;F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Torso</td>
<td>1</td>
<td>1024.342</td>
<td>1.594</td>
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<td>.761</td>
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</table>

#### ANOVA for Self-Esteem on Lower Torso

<table>
<thead>
<tr>
<th>Source</th>
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<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F Value</th>
<th>Pr&gt;F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low. Torso</td>
<td>1</td>
<td>110.55</td>
<td>110.55</td>
<td>3.95</td>
<td>.05</td>
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</tbody>
</table>

#### ANOVA for Self-Esteem on Limbs

<table>
<thead>
<tr>
<th>Source</th>
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<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F Value</th>
<th>Pr&gt;F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limbs</td>
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<td>1459.585</td>
<td>17.963</td>
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<td>.394</td>
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</tbody>
</table>
### Table E

#### Self-Esteem on Overall Satisfaction

<table>
<thead>
<tr>
<th>Self-Esteem Means</th>
<th>1=High</th>
<th>2=Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Satisfaction</td>
<td>85.72</td>
<td>96.00</td>
</tr>
</tbody>
</table>

#### Overall Satisfaction on Lower Torso by Sex

<table>
<thead>
<tr>
<th>Means</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex=1 (female)</td>
<td>16.16</td>
</tr>
<tr>
<td>Sex=2 (male)</td>
<td>13.44</td>
</tr>
</tbody>
</table>
Body Cathexis Grid-Female
ROSENBERG'S SELF-ESTEEM SCALE

QUESTIONNAIRE

In each blank, fill in the number that corresponds to your answer. Use the following system: 1- Disagree Strongly, 2- Disagree, 3- Neutral, 4- Agree, 5- Agree Strongly.

____1. On the whole, I am satisfied with myself.

____2. At times I think I am no good at all.

____3. I feel that I have a number of good qualities.

____4. I am able to do things as well as most other people.

____5. I feel I do not have much to be proud of.

____6. I certainly feel useless at times.

____7. I feel that I'm a person of worth, at least on an equal plane with others.

____8. I wish I could have more respect for myself.

____9. All in all, I am inclined to feel that I am a failure.

____10. I take a positive attitude toward myself.