

BODY IMAGE PERCEPTIONS AND CLOTHING BEHAVIOR ISSUES FOR  
ADOLESCENT DAUGHTERS AND THEIR MOTHERS

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BODY IMAGE PERCEPTIONS AND CLOTHING BEHAVIOR ISSUES FOR  
ADOLESCENT DAUGHTERS AND THEIR MOTHERS

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Seunghee Lee

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## VITA

Seunghee Lee, daughter of Haksoo, Lee and Keumhee (Jang) Lee, was born in South Korea. She graduated from Sookmyung Women's University in Seoul, Korea with a Bachelor of Science degree from the College of Economics & Commerce. She then worked for five years as an assistant director in the marketing and finance department for a company in Seoul, Korea. She entered the Graduate School of Auburn University in September, 2000. She married Dr. Yoonkook Park, son of Juyeon Park and Chung Ja Park. She has two daughters, Sarah and Michelle.

DISSERTATION ABSTRACT

BODY IMAGE PERCEPTIONS AND CLOTHING BEHAVIOR ISSUES FOR  
ADOLESCENT DAUGHTERS AND THEIR MOTHERS

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(B.S., Sookmyung Women's University, 1991)

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Directed by Pamela V. Ulrich and Lenda Jo Connell

The purpose of this study was to explore tween girls (ages 9-14) and their mothers in relation to clothing behavior issues, body image, and body satisfaction. The purposive sample consisted of 41 mother-daughter pairs recruited by an independent contractor, ([TC]<sup>2</sup> (Textile/Clothing Technology Corporation), in Raleigh, NC, where four research sessions were held. Subjects were divided into younger (9-11) and older (12-14) normal- and plus-size groups based on BMI percentiles for girls published by the CDC (Center for Disease Control and Prevention). Girls with BMI scores below the 85th percentile were classified normal-size; scores at and above that were considered plus-size. Mean BMIs were: 17.68 for normal-size younger, 19.09 for normal-size older, 27.40 for plus-size younger, and 29.44 for plus-size older. In each research session, mothers and daughters separately completed related questionnaires.

Research questions inquired into differences between mothers' and daughters' body image perceptions of themselves and each other, their ideal body images, and their dissatisfaction with their bodies. A set of nine female drawings (thin to large) was the stimulus (Stunkard, Sorenson, & Schulsinger, 1983). Several significant differences emerged. Plus-size girls saw themselves as smaller than their mothers saw them. Normal-size girls saw their mothers as larger than their mothers saw themselves. Girls' ideal size for adult women was smaller than their mothers' ideal. Mothers were more dissatisfied with their bodies than the girls were with theirs. Mothers and daughters had similar ideals for girls' body size. Mothers accurately perceived their daughters' wanting to be thinner.

Questions also probed decision-making on what to buy and wear. Compared to fathers, sisters, friends, or deciding on their own, mothers had the most influence on what to buy. Decisions on what to wear were made more on their own; mothers were influential but less so than in deciding what to buy; friends were less important than mothers. There were significant differences between mothers and daughters in rating the importance of seven decision factors concerning what to wear. Girls reported that *clothes that fit well* and *clothes that were comfortable* were significantly more important than their mothers rated them. Mothers rated *clothes that are the newest fashion* and *that friends would be wearing* as being significantly more important than their daughters reported. There was a significant negative correlation between girls' body dissatisfaction and their interest in clothes that were comfortable. The significant body dissatisfaction of plus-size girls was related to the greatest level of clothing deprivation (compared to normal-size girls) within all three categories examined: clothes for school, dress-up clothes, and clothes to wear when doing things with friends.

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## CHAPTER I. INTRODUCTION

According to the June 23, 2003, issue of *Trend Central*, 65% of adolescents (more often called “tweens”) say that they help with the grocery shopping (“Tween Intelligence”). Tweens influence family spending patterns both subtly and directly every day (“Tweens Take Over”, June 2003) and have considerable purchasing power. One of the reasons tweens’ purchasing power has increased in recent years is because their parents have provided them with greater financial support than any previous generation. In the 1960s, the baby boomers, the parent generation of today’s tweens, were credited with driving many aspects of market research. In the 21<sup>st</sup> century, tweens have become a focus of interest in the market and have more disposable income to spend on clothing and other items (“Spending It All On the Kids”, 2003). Indeed, tween consumers influence not only family expenses but also today’s retail market and are poised to become as influential as their boomer parents in many ways.

Research into tween behavior differs from that examining traditional adolescent segments in the 1960s or 1970s. “Tweens” is a marketing-derived term for older children and younger teens. According to Ryan (1966), adolescents are divided into early adolescents (ages 12 to 15 years) and older adolescents (ages 15 to 20 years). Curtis (1991) defined early adolescents as being between the ages of 11 and 15 years.

The term “adolescence” is derived from the Latin for “to grow up” and was first used in ancient Rome, around 193 B.C. (Graham, 2004). The term has traditionally focused on the age of individuals around the time of the beginning of puberty. It is today, on average, at about 14 -15 years. The term “teenager” was first coined in the 1940s in the U.S. for advertising and marketing purposes (Graham, 2004). The term “teenager” for marketing and advertising has now expanded to encompass the sub-category “tweens.” The new term appeared around 2000 in business articles (Duff, 2002; Finnerty, 2000; Smith, 2002; “Special Youth Demographic Series,” 2005; “Tweens Take Over” 2003).

According to a *Knight Ridder Tribune Business News* (Smith, 2002) the tween market is defined as ages 7- to 14-years-old, but more scholarly articles define tweens as ages 9 to 14 years. Limited Too, a division of the Limited Group, for instance, has created a signature sound music composed of hip hop, R & B, and pop music to appeal to its target market: 8- to 14-year-old girls. For the purposes of this study, tweens were defined as children between the ages of 9 and 14 years.

There are more than 23 million tween consumers in the U.S (“Special Youth Demographic Series,” 2005). Thus, many market researchers of consumer goods have an increasing interest in tweens’ consumer behavior. In addition, members of this age group have a particular interest in their appearance because of the dramatic physical changes that accompany puberty and their potential impact on the establishment of a body ideal (Cohn et al., 1987). Understanding adolescent behavior and what factors influence it are important to companies who develop new products aimed at tweens. According to *TD Monthly* magazine (“Tweens Take Over,” 2003) over 70% of boys and girls aged 13 years make their own clothing choices.

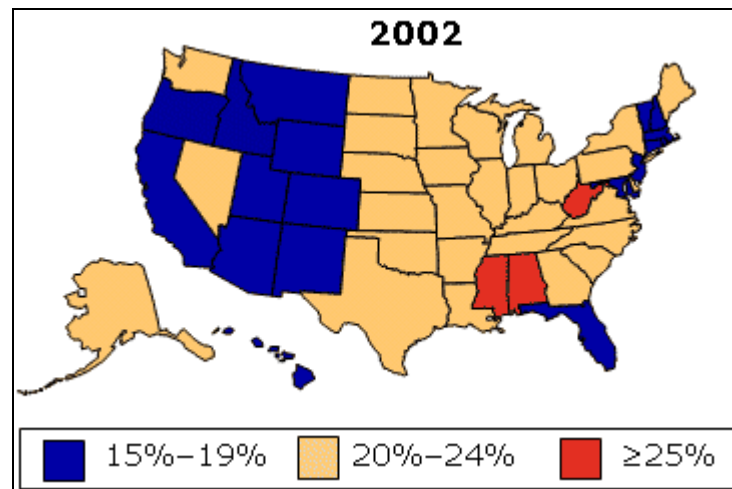
Research has typically focused on three aspects of adolescent behavior: (a) diet, including eating disorders, as well as weight concerns, body-image, and obesity studies unrelated to the apparel industry; (b) clothing choice as it relates to social or peer acceptance and peer conformity, primarily conducted by researchers in the apparel field; and (c) body-image studies, again conducted by researchers in the apparel field. There have been many different types of studies of adolescent behavior by scholars outside the clothing field, including pediatrics, nutrition, health and fitness, social psychology, cross-cultural psychology, consulting psychology, neurological and psychiatric disorders, and somatic disorders. These studies have tended to focus primarily on adolescents' dieting or eating behaviors, and the findings indicate that among females, adolescence is the period of greatest risk for developing eating disorders (Agras & Kirkley, 1986) and body-image problems (Cash, Winstead, & Janda, 1986). Body-image studies in these fields have been largely conducted in relation to dieting and eating behaviors, and depression is increasingly recognized as a significant problem for children and adolescents (French & Berlin, 1979; Rutter, Izard, & Read, 1986; Weller & Weller, 1984).

One of the recent big issues in the area of adolescent studies is obesity and recent findings indicate that obese mothers are more likely to have obese children (Whitaker, 2004). Paxton et al. (1991) found that the relationship between parental encouragement and frequency of dieting held for girls but not boys when Body Mass Index (BMI) was accounted for. Those girls who reported a parent who dieted, dieted more frequently themselves; this was not, however, the case for boys.

In a study of elementary school children (Thelen, Powell, Lawrence, & Kuhnert, 1992), fourth-grade girls expressed concern about being overweight and reported

engaging in dieting behaviors. Lawrence (1991) found that third grade girls desired to be thinner and engaged in dieting behaviors significantly more often than boys of the same age. According to the Centers for Disease Control and Prevention (CDC) (“BMI for Age,” 2005), the past 20 years has seen a dramatic increase in obesity in the United States and the rate of obesity among adolescents has tripled over the last two decades.

BMI  $\geq$  30, or ~ 30 lbs. overweight for 5'4" woman



*Figure 1:* U.S. obesity trends 1985 to 2002

In 1991, only four states reported obesity prevalence rates of 15–19% and no states reported rates at or above 20%. In 2002, 18 states reported obesity prevalence rates of 15–19%; 29 states had rates of 20–24%; and 3 states had rates over 25%, as indicated on the map in Figure 1. Many researchers, from medical doctors to psychologists, have studied the relationship between obesity and adolescence and the related issues of self-esteem, body image, and binge eating.

Academic researchers in the clothing field have generally focused on the relationship between body image and self-schema, self-esteem, and gender roles (Jung, Lennon, & Rudd, 2001; Lennon, Rudd, Sloan, & Kim, 1999). One important finding is that self esteem has been found to be positively related to both attractiveness (Mathes & Kahn, 1975; O'Grady, 1989) and body satisfaction (Lennon & Rudd, 1994).

Researchers have emphasized the importance of social acceptance, appearance, and conformity with peers or family groups. Kness (1973, 1983) studied the clothing-related behavior of early adolescent girls based on socioeconomic level and cultural affiliation and studied clothing deprivation satisfaction in three ethnic groups. Wilson (1971) found a relationship between clothing awareness and clothing satisfaction/deprivation and social class in children as young as kindergarten. Young women's attitudes and buying patterns relating to clothing was further revealed in a survey ("Teen Survey," 1975a, 1975b). This survey examined students' skirt length preferences, female students' priorities in spending their own money, what influenced their selection of wearing apparel, and female students' thoughts on clothing.

Clothing is first and foremost a visible means of covering the body and has been referred to as the "second skin." Clothing becomes a part of the body image, and the same concerns that are attached to the body are often attached to clothing (Horn & Gurel, 1981). Thus, it is essential to study clothing and body image together when analyzing tween behavior. Kaiser (1997) noted that clothing may be perceived differently in relation to body image. Cash (1994) described clothing as one's attitudes toward the physical self. Therefore, an understanding of "twens" in terms of their body image and clothing behaviors would be beneficial to clothing marketers and retailers for the future

development of new product and marketing niches. An understanding of tweens' clothing behavior could help to develop clothing markets, styles, designers, and retailers specific to the market.

Some authors (Usmiani & Daniluk, 1997; Wilson, Sargent, & Dias, 1994) have noted that there is a relationship between the physical and psychological behaviors of tween girls and their mothers. The findings indicate that the self-image of mothers influences the self esteem, self concept, body image, and dieting behavior of their daughters. However, few studies have focused on the effects of this relationship on tween clothing choices and body image. McGuire and McGuire (1982, 1987) found that children tend to define themselves in terms of the same-gender parent. Girls mentioned their mothers twice as often as their fathers (Curtis, 1991). Youniss and Smollar (1985) reported that the quality of communication between mothers and daughters was very different from that between fathers and daughters. Mothers and daughters spent more time in shared activities, and mothers were less authoritative and more personal, intimate, and mutually sharing in their interaction with their daughters (Curtis, 1991). However, few studies have focused on understanding in detail the meaning of clothing behavior issues and the importance of the body images of adolescent girls and their mothers.

Most research connected with young females has taken the form of surveys or individual interviews designed to reveal in detail the meaning of clothing behavior issues and the body images of adolescent girls and their mothers. Therefore, the purpose of this study was to extend this work to include the interactions of tween girls (aged 9 to 14 years) and their mothers in relation to clothing behavior issues and body image.

## Statement of the Problem

Research has shown that mothers can influence adolescent children, but there has been little work focused specifically on tween girls and their mothers in relation to body image and clothing behavior issues. Clothing is not only a second skin for mothers and daughters, but also a communication tool between them. This study focuses on appearance as an indicator of body image and the ways that mothers and daughters communicate with each other by means of clothing and body image. Through their interactions with their mothers, daughters learn their mothers' values regarding clothing, body image, and attractiveness, which may influence their own attitudes about their gender and approaching womanhood.

## Research Questions

The research centered on the following questions.

1. Is there a difference between mothers' perceptions of their daughters' body image and the daughters' self-defined body image?
2. Is there a difference between daughters' perceptions of their mothers' body image and the mothers' self-defined body image?
3. Is there a difference between mothers' identification of the ideal body size for themselves and their daughters' identification of the ideal body size for adult women?
4. Is there a difference between daughters' identification of the ideal body size for themselves and their mothers' identification of the ideal body size for girls their daughters' age?



5. Is there a difference between mothers' and daughters' dissatisfaction with their own bodies?
6. Is there a difference between mothers' dissatisfaction with their daughters' bodies and daughters' dissatisfaction with their mothers' bodies?
7. a. Is there a relationship between the frequency of the mothers' fashion magazine readings and the mothers' rating of their own ideal figure?  
b. Is there a relationship between the frequency of the daughters' fashion magazine readings and the daughters' rating of their own ideal figure?
8. What are the differences among influentials (mother, father, sister, friend, self) in helping daughters decide what clothes to buy and wear?
9. Is there a difference between mothers' and daughters' rankings of clothing decision factors for what to wear?
10. Is there a relationship between girls' dissatisfaction scores and clothing decision factors of what clothes to wear?
11. Do mothers correctly perceive their daughters' weight concerns?
12. Is there a relationship between the daughters' perception of their own body image and their mothers' involvement?
13. Is there a relationship between daughters' perceptions of their friends' weight concerns and their own body image?
14. Is there a relationship between daughters' body dissatisfaction and clothing deprivation?

## Definition of Terms

The following terms were defined for this study:

*Tweens*: A marketing-derived term for older adolescents and younger teens. For this study tweens is defined as children between the ages 9 and 14 years.

*BMI*: The Body Mass Index, used to express the relationship of weight-to-height. The body mass index is calculated by an individual's weight in kilograms divided by the square of their height in meters. Body mass index is used to assess an individual's underweight or overweight status, as well as their risk of becoming overweight ("BMI for Age," 2005).

## CHAPTER II. REVIEW OF THE LITERATURE

The review of literature provided in this chapter focuses on six subjects, all of which touch on issues surrounding tween clothing behaviors and body image. These are: clothing deprivation or satisfaction; family and peer influences; the mother–daughter relationship, including clothing behavior and the mother–daughter relationship, body image and the mother-daughter relationship; adolescents and clothing, body image and body satisfaction; the influence of the media; and adolescent attractiveness perceptions.

### Clothing Deprivation or Clothing Satisfaction

Studies reveal that clothing deprivation/satisfaction has a great effect on adolescents' self-esteem and social participation behaviors. An inability to dress the part can produce emotional and psychological stress in adolescents (Kness, 1983). The definition of clothing deprivation is discontentment with dress in relation to physical and psychological comfort (Bolton, 1970). A number of studies of clothing deprivation or clothing satisfaction have focused on socioeconomic status, and clothing deprivation is related to a low self-image and poor social adjustment and peer acceptance in adolescents (Brawley, 1971; Bretwon, 1971; Cheek, 1978; Kness, 1973).

Kness (1973) noted that clothing deprivation may be multidimensional and include issues of aesthetic, qualitative, and quantitative deprivation. To measure clothing

deprivation, Kness (1973) used five measurements: clothing deprivation/satisfaction, clothing attitudes and practices (Creekmore, 1966), self-esteem, social security-insecurity (applying the Lapitsky measure: Lapitsky, 1961), and socioeconomic status. Creekmore's clothing measurement scales assessed clothing attitudes and practices including aesthetics, approval, attention, dependence, interest, management, and modesty.

The aesthetics subscale measured clothing color combinations, line, texture, and fabric textures, along with the line of the garment. The subscale of Interest asked about being aware of the newest clothes each season and trying on different garments and accessories to see how they look together, and reading magazines and newspapers to keep up with what is new in clothing. The study by Kness featured 301 participants who were adolescent females of African American, Anglo-American, and Mexican American heritage in west Texas.

The Anglo-Americans and Mexican Americans were positively correlated for clothing deprivation-satisfaction and clothing aesthetics. Specifically, the number of items in various wardrobe categories and clothing deprivation-satisfaction showed a significant positive relationship among Anglo-Americans and Mexican Americans. Kness (1973) also analyzed the relationships among other variables, including self-esteem, social security-insecurity, socioeconomic status, clothing attitudes and practices, and the wardrobe inventory. Anglo-American participants displayed a positive relationship not only between self-esteem, security-insecurity, and clothing approval but also with socioeconomic status, clothing aesthetics, attention paid to clothing, interest in clothing and clothing management.

One of the interesting findings from Kness (1973) was that all the participating adolescents who expressed clothing satisfaction had high self-esteem, while the adolescents who expressed clothing deprivation feelings had low self-esteem. As a result, there were significant relationships between clothing deprivation-satisfaction and self-esteem for all three ethnic groups (Kness, 1973).

Francis (1992) studied clothing deprivation among high school students and its relation to social participation among 300 high school students enrolled in home economics classes in the 9<sup>th</sup> grade through 12<sup>th</sup> grades at six high schools. The participants ranged in age from 13 to 20 years old. The study used factor analysis and a multivariate analysis of variance (MANOVA) for two clothing deprivation factors: inability to buy (Social Competence and Social Participation) and clothing deprivation relative to peers.

Social competence was measured by responses to three questions: (1) Compare yourself with other kids your age. How attractive do you consider yourself to be? (2) Compare yourself with other kids your age. How popular do you believe yourself to be? (3) How good are you are at making other kids like you?

Social participation was measured by responses to three additional questions: (1) In comparison with other kids your age, how much time do you spend with your friends? (2) How many social events do you attend in a normal week? (3) If you are invited to attend a social gathering, how often do you accept?

In this and other studies of clothing deprivation/satisfaction, researchers almost invariably frame the questions in terms of comparing “me” and “others.” Thus, clothing

deprivation/satisfaction is assumed to result from the approval or disapproval of others, such as peers. The findings in Francis' study revealed that clothing deprivation (inability to buy, clothing deprivation relative to peers) had a significant effect on social participation and social competence.

Roach's (1960) study of attitudes toward clothing included two questions designed to determine girls' feelings of clothing deprivation. The two questions related to clothing deprivation were whether they had ever felt their clothes were not right or wished they had not gone some place because their clothes were not appropriate, and whether compared to other girls with their age, they felt better dressed, average, or less well dressed. The study included responses from one hundred girls and hypothesized that lower social class is not significantly associated with clothing deprivation. The study explored concepts of mothers' clothing along with their daughters, believing that girls' concepts of clothing might be influenced by their mothers. Results showed that girls tended to express strong approval if their mothers displayed an interest in clothing.

#### Family and Peer Influence on Clothing Attitudes

##### *Peer Influence on Clothing Attitudes*

Clothing is a visible form of expression. Clothing has been recognized as one of the clues used by people in forming impressions of others and, therefore, affects the selection of friends and acquaintances (Haley & Hendrickson, 1974). Kaiser (1983-1984) demonstrated the importance of clothing and appearance through linking the stages of social acceptance with participation in interpersonal situations. Cannon, Staples, and

Carlson (1952) found that for girls, personal appearance was significantly related to social acceptance.

Hoult (1954) found that differences in judgment of personal characteristics were related to clothing choices. Family relationships and child development are also known to have a great effect on the growth of independent activity in each of the clothing practice areas, pointing up the influence of parents, siblings, and peers on clothing practices (May, 1982). Schlater (1970) cited the influence of clothing in the development of an individual's self-concept and noted one function of clothing as symbolic in helping individuals and families play roles, develop self-images, and project desired images.

#### *Peer Influences, Acceptance, and Social Participation*

Several studies have explored the effects of peer groups on adolescents' clothing behavior, showing that clothing and appearance affect adolescents' acceptance in and conformity to peer groups. For instance, upon entering school, a child's focus shifts from the family to the peer friendship group, with the change becoming more evident during the adolescent years (Bowerman and Kinch, 1959). Additionally, it is during adolescence that clothes seem to assume their greatest importance (Hurlock, 1955).

Studies of adolescent clothing conformity, awareness, peer acceptance or social acceptance, social participation, and group membership and clothing have been conducted by several researchers (Kelly & Eicher, 1970; Littrell & Eicher, 1973; Ryan, 1966; Smucker & Creekmore, 1972 ). All concluded that social isolation resulting from clothing choice deprivation and appearance negatively affects the adolescent stage. A more detailed discussion of these studies follows.

In Smucker and Creekmore (1972), the adolescent is characterized by a preoccupation with appearance, especially, clothing. Adolescents display a marked sameness in appearance in terms of clothing worn within the community or school. The research recorded results from 121 boys and 110 girls in the sophomore class in a central Michigan high school. Smucker and Creekmore noticed that the adolescents displayed a strong desire for peer approval and acceptance. This supported by Ryan (1966), who maintained that the peer group is the most important influence on adolescents.

The longitudinal study by Kelly and Eicher (1970) investigated the opinions and attitudes of high school girls concerning dress, the influence of clothing on social acceptance, and related factors. This study demonstrated clothing choice status as it relates to friendship position in the sociograms. Ninth- and 12<sup>th</sup> grade girls were asked about the “most popular” and “best dressed” girls in their grades. The responses indicated the importance that teenagers place on peer acceptance. Isolation was found to occur on both ends of the spectrum, for both well dressed and poorly dressed girls. The isolation of well dressed girls, however, was by self-choice, whereas poorly dressed girls were excluded by others from the peer group. Other studies (Ogletree, Williams, Raffeld, Mason, & Fricke, 1990; Stephens, Hill, & Hanson, 1994) have found that appearance is likely to be an important factor by which teenagers make friendship choices, regardless of social class.

Littrell and Eicher (1973) used RFS (Reciprocal Friendship Structure), a sociometric diagram of individual friendship choices to study 154 ninth-grade girls at a large mid-western high school. In their study RFS was divided by reciprocated



friendship choice, unreciprocated friendship choice, became member of chosen RFS, did not become member of chosen RFS, do not agree with RFS, and agree with RFS. The adolescents showed a desire to belong to and be a part of friendship groups. This study used a school social acceptance score, a group social acceptance score, and a self-satisfaction score. One finding was that clothing and appearance seem to be important factors for girls in terms of social isolation to social acceptance.

A study by Humphrey, Klaasen, and Creekmore (1971) found that boys and girls with higher levels of self-esteem were concerned with a pleasing appearance and were unafraid to draw attention to themselves through the use of clothing. Hamilton and Warden (1966) reported that girls' clothing behavior was influenced more by peers, while boys' clothing behavior was influenced more by their families. May and Koester (1985) found that parental influence in clothing selection decreased as a child's age increased. Kelly, Good, and Walter (1974) found that teenagers recognize the important of clothing in the occupational world, not only as a functional item but also as an influential item that could be manipulated to create an impression and influence other people.

The power of peer influence on clothing selection practices was demonstrated by Kelly, Daigle, LaFleur, and Wilson (1974) in a variety of social activities. They studied 324 eighth-grade, urban/rural, black/white, working class and lower-class boys and girls. Factors included in the study were dress and club membership, club participation, and desired club membership, among others. They found that 62% of working-class black males versus 40% of working-class white males said that they would participate in activities only if they had the right clothes. In this study, there were significant

differences in the social participation patterns and dress practices of the respondents according to their social class, ethnic background, or gender.

Clothing helps express adolescents' desire to identify with and be accepted by their peers ("Relationship of Clothing", 1972). Adolescents may wish to dress like their peers in order to show their desire to be understood and accepted by them. For this study, over 2,000 students participated in the data collection. The study examined how the females dressed in terms of skirt length, skirt silhouette, skirt type, shoe type, leg covering, waistline placement, purse type, fabric type, and color. The males' style of dress was assumed in terms of trouser length, trouser width, trouser type, shoe type, sock type, shirt type, sweater type, fabric type, and color. The study was designed to identify degrees of conformity and awareness, and relationships between personal and social variables, social acceptance, social participation, socio-economic status, and scholastic achievement. The results revealed that there was no relationship between conformity and social participation. However, there was a significant relationship between awareness and GPA for girls. This study provides some useful insights into understanding the values that are important to teen-age society in terms of dress.

Moschis, Moore, and Stephens (1977) studied the purchasing patterns of 607 adolescent consumers ranging from the 6<sup>th</sup> to the 12<sup>th</sup> grade. The study used three categories of adolescent independence in purchasing selected products, along with convenience, shopping, and specialty goods, to measure purchasing role structures, purchasing by social class, and by age. Adolescents tended to purchase clothing jointly with other family members, whereas purchases of adolescent specialty goods (records,

tapes, sporting equipment, and movie tickets) tend to be purchased without family members. Further results indicated that adolescents tended to depend on adult family members when purchasing high-priced or socially risky items such as coats or sports equipment. This dependence was most noticeable among the upper classes of society and may reflect greater parental concern over the child's well being, competence, and social acceptance.

Gold and Yanof (1985) found that both the values and capacities for intimacy that characterize peer relationships are significantly affected by the values and capacities for intimacy that characterize the parent-adolescent relationship. This suggests that peer relations may aid adolescents in their separation from their parents (Siegel, 1982).

May and Koester (1985) noted that the importance of the peer group seemed to peak during the junior high school years (seventh, eighth, and ninth grades) and then decline gradually as young people developed their individuality and independence. The study used 9 to 19 year olds boys and girls who participated in Oregon's 4-H youth programs. The 4<sup>th</sup> to 7<sup>th</sup> graders in this study were aged 9 to 13 years and the 8<sup>th</sup> to 12<sup>th</sup> graders were aged 14 to 19 years. The study employed 34 questions using a Clothing Practice Survey.

The study was analyzed for independent activity, family influence, peer influence, media influence, label information, and selection factors. There was no significant influence from siblings on clothing purchase or practices for all age groups. Parental influence on clothing purchase practices decreased with increasing age of the adolescents. In contrast, peer influence on clothing purchase practices increased with increasing age of

the adolescents. There was minimal media influence on buying clothing from television, newspapers, or magazines for all age groups. The use of label information for clothing purchases increased with increasing adolescents' age. In the selection factors, fit was the most important consideration in the purchase of clothes.

George, Stevenson, Thomason, and Beane (1992) found that adolescents demonstrate a powerful need to belong to an identifiable peer group, and the group concerned is often associated with unconventional clothing, hairstyles, language, or behavior patterns. As adolescents transfer personal identities from parents to peers, their peers become the main source for standards, models of behavior (California State Department of Education, 1987) and advice when making important decisions (Schultz, 1989).

Peer conformity can become an adolescent obsession. The peers become the main source for standards, models of behavior and advice when making important decisions (Schultz, 1989). Group belongingness and social participation are influenced by individual feelings about the self as a member of a group (Horn & Gurel 1981). In searching for a self image and identity, adolescents become preoccupied with their appearance (Daters, 1990). Simpson (1994) mentioned that adolescents generally decide alone when purchasing from catalogs, but if there is an outside influencing factor, it will generally come from friends. Adolescents' parents, however, have more influence on higher risk purchases, such as coats, than lower risk purchases, such as socks. The parents generally pay for the purchases.

Peer approval of clothing in social activities within the adolescent stage may be important to participation or isolation in the peer group. Below is the discussion of the mother–daughter relationship and its effect on clothing choices for adolescents and daughters’ body image.

### The Mother–Daughter Relationship

#### *Clothes and mother- daughter relationships*

In 1973, Kernan published a study on the mother–daughter relationship and its effect on clothing and cosmetic fashion choices. He noticed that clothing and cosmetic items have psychosocial implications for young girls, particularly “what she looks like.” He studied two primary questions: first, the impact of parental influence on the daughter’s norms, and second, the difference in personality profiles between girls with the greatest number of peer-designated high-fashion items and their peers. Fifty-seven seventh and eighth graders between the ages of 12 and 14 years from predominantly blue-collar families were included in the study. This study focused on the possession of sixteen items in the clothing and cosmetics categories, including fashion boots, eye makeup, and Maxi coats. Maxi coats were the fashionable ankle length coats introduced in the fall of 1969, a radical change from the previous mini coat styles (Calasibetta, 1988).

One of the interesting findings was that the greater number of products possessed of the sixteen items in the clothing and cosmetics categories, including fashion boots, eye makeup, and Maxi coats, the more fashion-innovative the adolescent. So, the 11 girls out of 57 girls, who possessed the highest number of products (10 -12 items) were labeled

innovators and early adopters. The study examined the personalities of the innovators or early adopters, whose group means were significantly different than those of the other 46 girls. The mothers of the innovators, however, were insignificantly different from the other 46 girls' mothers. So, the study reported that the girls labeled as innovators might not have adopted traits from their mothers.

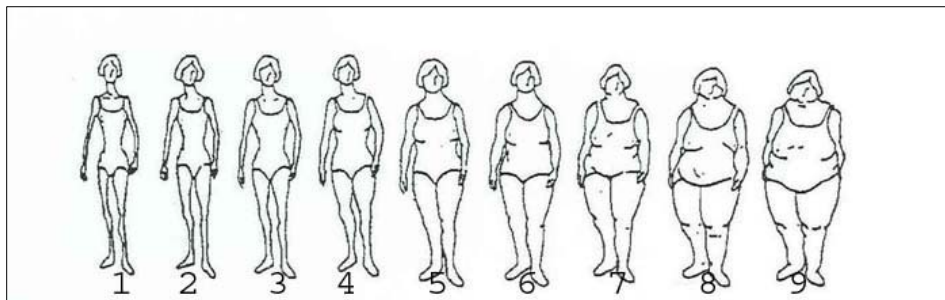
#### *Body image and the mother–daughter relationship*

Body image is what the mind does to the body in translating the experience of physical embodiment into its mental representation. This translation from body to body image and to body-cathexis is a complex and emotionally charged process (Hutchinson, 1982). The body image or body self refers to the images and feelings an individual holds about his or her body (Schilder, 1935; Rosenbaum, 1979). Another definition of body image centers on the way people perceive their own bodies, including collective attitudes, feelings, and fantasies (Fisher, 1986; Sault, 1994). Thus, body image mediates the relationship between an individual's personal and social identity (Öberg & Tornstam, 1999). In a study of adolescent girls, Nichter & Nichter, (1991) described the ideal girl as 5 feet 7 inches tall, 100 pounds, size 5, with long blond hair and blue eyes.

A substantial percentage of adolescent girls feel dissatisfied with their body weight, size, and shape (Cohn, et al., 1987; Eisele, Hertsgaard, & Light, 1986; Huon, 1994; Maude, Wertheim, Paxton, Gibbons, & Smukler, 1993; Paxton, et al., 1991; Wardle & Marsland, 1990). Curtis (1991) studied 36 mother-daughter pairs. The adolescents in the group were identified as at risk for delinquent or maladaptive behavior and were between the ages of 11 and 15 years. The study found that the mothers' self

concepts were related to their daughters' self concepts. Usmiani and Daniluk (1997) studied 82 mothers and their daughters, focusing on the issues of self-esteem, gender role identity, and body image. The starting point for this study was a national survey of adolescent girls who expressed dissatisfaction with their bodies and were attempting to lose weight through weight loss programs. One significant finding was that higher self esteem came from a positive body image and positive attitudes toward their mothers. The study employed the SIQYA (Self Image Questionnaire for Young Adolescents) (Offer, Ostrov, and Howard, 1982) and RSEI (Rosenberg Self Esteem Scale) (Rosenberg, 1965), both of which have been widely used to assess self acceptance for adolescents.

The size of a girl's mother may have an influence on what body size the daughter perceives as an ideal body size for females. Wilson, et al. (1994) used 93 black and 80 white female subjects in a public high school aged 14 to 17 years. They were asked to select the image from a figure developed by Massara and Stunkard (1979) that was most similar to their mother's body size. The authors found that participants were likely to select #1 and #2 as an underweight , #3 as a normal weight, and from #4 upward as an overweight figure.



*Figure 2.* Nine female drawings

Both the adolescents and their mothers were measured for height and weight. Wilson, et al. (1994) found that different ethnic and cultural groups displayed differences in ideal body size. For example, black female adolescents preferred a larger body size than white female adolescents. Of the participants in this study, 30 percent of the adolescents were themselves defined as overweight or obese. Ideal body size was positively associated with the mother's size and race, but not with Social Economic Status (SES), which was based on the education level and occupation of the parents.

Thelen and Cormier (1995) used a fourth grade sample of boys and girls and their parents. The study focused on daughters' body weight and desired weight, and their parents' influence. Parents were asked whether they had lived with the child throughout the child's entire life, their body mass index, their desired body weight, dieting frequency, and concern with their child's weight. Results were compared by gender and by whether or not the family included two parents or one. The results indicated that a daughter's body weight, desired body weight, and dieting behavior were influenced by her mother's concerns regarding her daughter's weight control. Body mass index was not significantly correlated with a desire to be thinner and self-reported dieting frequency for boys. Both girls' and boys' perceptions of control/lose weight, however, were significantly correlated with encouragement from their mothers.

Hill and Franklin (1998) investigated the effects of the mother-daughter bond and the transmission of weight control issues. Forty 11-year-old girls were divided into two groups: a high dietary restraint group and a comparison group: their mothers were asked to indicate body shape preference, self-perception, body-esteem, self-esteem, family



functioning, and body weight and height. The high dietary restraint group was divided by their dietary restraint score. Stunkard, Sorenson, and Schulsinger's (1983) nine line drawings of male or female figures were used for body shape preferences. Both current shape and preferred shape were recorded. The body shape satisfaction score was derived from subtracting the current shape rating from the preferred shape. The score "zero" indicated satisfaction, while a negative score indicated the desire to be thinner.

Hill and Franklin (1998) found that the high dietary restraint group significantly preferred a thinner body and desired to lose weight more than the comparison group. Both groups of mothers placed their daughters slightly above the attractiveness of other girls their age, but mothers of high-restraint girls rated their attractiveness significantly lower than mothers of the comparison girls.

Abramovitz and Birch (2000) investigated the youngest group of participants, 5-year-old girls, and their dieting habits as they related to those of their mothers. The sample in the study was 197 girls with no food allergies or chronic medical problems and their biological parents. The focus was on dieting, weight control, and body shape concerns. BMI was calculated for both girls and their parents. The researchers employed a dieting ideas questionnaire that assessed 5- to 9-year-old girls' knowledge and ideas regarding weight control, a weight concern scale, and an eating inventory scale. Findings from the study indicated that 34% to 65% of the 5 year old girls had ideas about dieting. Daughters whose mothers reported current or recent dieting were more than twice as likely to have dieting ideas than girls whose mothers did not diet.

## Body Image and Body Satisfaction in Adolescents

Gray (1977) found that females were more likely to view themselves as overweight even when by objective standards they were not. Males, however, were more likely to perceive themselves as underweight with respect to objective standards. Eisele et al. (1986) found that 78% of 12- to 14-year-old girls would prefer to weigh less and only 14% reported that they were satisfied with their current weight. Mendelson and White (1982) studied elementary school childrens' relationship between self-esteem and body esteem of obese and normal children. Thirty-six elementary school children aged between 7 ½ and 12 years participated in the study. Twenty subjects were below and 16 were above the 15<sup>th</sup> percentile, indicating they were overweight in terms of their relative weight for height for their age.

Results for body esteem as a function of self-esteem and relative weight revealed that body esteem and self esteem explained 47% of the variance, while the relative weight explained 14% of the variance with body esteem. There is thus a correlation between body esteem and relative weight. Overweight children had lower opinions about their bodies and personal appearance than did normal-weight children.

Davis and Furnham's (1986) study of body dissatisfaction among four age groups (12-, 14-, 16-, and 18-year-olds) of female British adolescents focused on body satisfaction in nine body areas: upper thigh and buttocks, stomach measurements, bust, teeth, face, arms, legs, feet, and hands. Their findings suggested that the 18 years olds had the greatest body dissatisfaction among the age groups. This group was dissatisfied with their bust, waist, and hip measurements. The study suggested that body

dissatisfaction increased during adolescence and was linked to psychological self-esteem and excessive dieting.

Fallon and Rozin (1985) studied 248 male and 227 female college students using a set of nine figure drawings arranged from very thin to very heavy. Subjects were asked about (1) their current figure, (2) their ideal figure, (3) the most attractive figure that they felt for the opposite sex, and (4) the opposite-sex figure that they would be most attracted to. The findings showed that for women, their current figure was heavier than the figure they selected as their most attractive figure, which was itself heavier than the ideal figure. Both male and female college students had the opposite opinion of what the opposite sex would find attractive in the study. Men thought that women liked a heavier stature than females actually reported, while women thought that men liked women who were thinner than they actually do. Overall, men's perceptions indicated they were more satisfied with their figures, whereas women's perceptions revealed the pressure on them to lose weight.

Body figure preferences of male and female adolescents in a study by Cohn et al (1987) were based on the nine female and male drawings developed by Stunkard et al (1983). This study replicated the procedure used by Fallon and Rozin's (1985) perception of body figure. However, the subjects in this study were 288 female and 283 male adolescents aged 10 ½ to 15 years. The subjects were in sixth, seventh, and eighth grade and were 29% black, 26% white, 19% Asian, 14% Hispanic, and 12% undefined compared with Fallon and Rozin's majority white sample.

The study showed that there was no difference between male and female adolescents in body figure dissatisfaction. Adolescent girls showed a bias toward

thinness, while boys revealed a bias toward larger figures. Girls with more advanced pubertal levels showed a greater discrepancy between current and ideal figures than did less developed girls. For girls, grade differences were marginally present in the choice of an ideal figure, as seventh- and eighth-grade girls chose slightly thinner figures than did sixth-grade girls. However, in all ethnic backgrounds, the girls desired a body figure that tended to be thinner than the figure that was considered most attractive by the boys. There was no significant difference between the actual and ideal figures in the 10 ½ -15-year-old girls, although 38% had a thinner ideal than their current figure.

Other studies have suggested that adolescent girls in competitive environments that emphasize weight and appearance experience increased social pressures to meet the thin ideal (Brooks-Gunn, Burrow, & Warren, 1988; Brooks-Gunn & Warren, 1985; Garner & Garfinkle, 1980; Hamilton, Brooks-Gunn, & Warren, 1985). In a longitudinal study by Attie and Brooks-Gunn (1989), girls who early in adolescence felt most negatively about their bodies were more likely to develop eating problems 2 years later. This study examined the emergence of eating disorders, including weight preoccupation, dieting, and bingeing behaviors, from a developmental perspective.

Brown, Cash, and Mikulka (1990) also used the Multidimensional Body Self Questionnaire (MBSRQ) developed by Cash et al. (1986). Many studies have used MBSRQ for body image studies, which was specifically intended for use with individuals between 15 and 87 years rather than with adolescents. This study measured appearance evaluation, appearance orientation, fitness evaluation, fitness orientation, health

evaluation orientation, and illness orientation, and Brown et al. (1990) found that females exhibited greater differentiation of body image attitudes than did males.

Paxton et al. (1991) studied body image and weight loss beliefs and behaviors among 341 female and 221 male high school students. In this study, girls were significantly more dissatisfied with their bodies than boys, although BMI was positively related to body dissatisfaction in both girls and boys. Nearly two thirds of the girls and boys believed that being thinner would have an impact on their lives, but girls believed being thinner would be more positive than did boys.

Pubescent subjects in Blyth, Simmons, and Zakin's (1985) study of body image demonstrated that physical changes play an important role in the development of body image. The study was focused on a sample of 225 sixth- and seventh-grade white girls. The participants were divided into early developers, middle developers, and late developers according to their menarche status. The study used three body measurements (height, weight, and figure development) to determine satisfaction with body image in two school environments, a K-6 school and a K-8 school. Early-maturing girls were more dissatisfied with their body than late maturing girls. However, late-maturing girls in the K-8 school environment were more satisfied with their bodies than girls in the K-6 school environment.

Brodie, Bagley, and Slade (1994) studied body image perceptions in 59 prepubescent girls (with a mean age of 9.3 years) and 41 postpubescent girls (with a mean age of 14.1 years). Pubescent was determined by whether the adolescents had experienced a menstrual period. The mean BMI (Body Mass Index) score for

preadolescents was 17.9 and for postadolescents was 19.9. The study employed visual distortion to measure perceived and ideal body size. The body satisfaction scale displayed 16 body parts. Results indicated that postadolescent girls were more dissatisfied than preadolescents for general, head, and body aspects. However, there was no significant difference in their perceptions of actual body image, although both groups wanted to look thinner than they currently were.

A study by Feldman, McGrath, and O'Shaughnessy (1986) also revealed adolescents' pursuit of thinness. Two hundred seventy one high school students who participated in this study were asked questions regarding self perception of body size, shape, degree of satisfaction, desired weight and weight reducing behaviors, and were administered the Eating Attitudes Test and Eating Disorder Inventory. These students were measured for height, weight, and tricep skin fold thickness. The results revealed that there were significant increases in drive for thinness, bulimia, body dissatisfaction, and feelings of ineffectiveness for girls. A number of non-obese girls who thought that they were too fat also engaged in dangerous weight-reducing behaviors.

Rucker and Cash (1992) studied perceptions of body image and body size, in particular body image attitudes, body image perceptions, weight concerns and eating behaviors, and judgments of the thinness or fatness of varying body sizes. One of the interesting approaches taken by this study was to determine racial differences between African American and white female college students regarding body image and eating behaviors. Several very high BMIs among blacks and several low BMIs in whites were found in the sample. The instrument included the 69-item Multidimensional Body Self

Relations Questionnaire (MBSRQ), the Body Image Automatic Thoughts Questionnaire (BIATQ), the Body Image Avoidance Questionnaire (BIAQ), and the Goldfarb Fear of Fat Scale (GFFS). African American college females evaluated positively their overall appearance, expressed fewer negative thoughts about their bodies, and had fewer concerns about dieting, fatness, and weight concerns. White women desired thinner bodies and their ideal body was significantly thinner than their perceived size.

Williamson, Davis, Goreczny, and Blouin (1989) studied body image distortion and ideal body size preferences among 423 non-bulimic college women and 108 bulimic women from an outpatient eating disorders clinic. Nine cards (6 in x 9 in) displaying women's silhouettes from very thin to very obese were used for body image assessment. The two dependent variables- current body size score (CBS) and ideal body size score (IBS)-were recorded for data analysis. Bulimic women chose a significantly larger current body size than non-bulimics and also chose thinner ideal body sizes than non-bulimics. The results demonstrate that perception of large body size and thin ideal body size result in higher body dissatisfaction in bulimia nervosa patients.

A body image and body size overestimation study was also conducted by Strauman and Glenberg (1994). Female college students were asked to determine a Body Shape Concern (BSC). They were interviewed regarding five self-states: actual/own, ideal/own, ought/own, ideal/significant other, and ought/significant other. The women in the study were shown nine female silhouettes ranging from very thin to very obese originally developed by Williamson et al. (1989). The figures were copied onto six cards for each of the nine silhouettes, for a total of 54 cards. The silhouettes were separated into

three groups; smaller than the actual body size, larger than the body size, and the same dimensions as the body. The mean of BMI for the high Body Shape Concern (BSC) group was higher than that of the low BSC group (22.7/19.52). The high BSC group had a significantly higher self-appearance discrepancy than the low BSCs. For the silhouettes, the low BSC group underestimated their body size and the high BSC group overestimated their body size.

McCabe and Ricciardelli (2001) studied 20 seventh grade boys (with a mean age of 12.55 years) and 20 ninth grade boys (with a mean age of 14.85 years) in Melbourne, Australia. The boys were asked about their satisfaction with weight, body size, body shape, muscle tone, and parts of their body, weight concerns, and exercise to change body size, shape or muscle tone. Most of the boys were born in Australia, but some were born in Europe, Asia, and Middle Eastern countries. The average BMI of the seventh grade boys was 20.60 and 23.51 for the ninth grade boys.

The boys in the study were generally satisfied with their body weight, shape, and muscle tone. The most frequently identified body areas in need of improvement were the chest, shoulders, and stomach. The boys were divided by (BMI) at a median of 21.6. Boys with a larger BMI were less satisfied than smaller boys with their in muscle tone. The seventh grade boys were more satisfied with their current weight than the ninth grade boys. These results were similar to a previous study, which reported that 18-year-olds had greater body dissatisfaction than other age groups (Davis & Furnham, 1986).

Another study using boys as the sample was conducted by Staffieri (1967). Staffieri studied 90 boys aged between 6 and 10 years to understand the behavior and



personality traits related to different body types. The boys were asked to assign body type silhouette preferences including endomorph (fat), mesomorph (muscular), and ectomorph (thin) with adjectives such as strong, best friend, quiet, fights, kind, happy, polite, good looking, weak, ugly, and neat. For each silhouette, the interesting finding was that 62 boys out of the 90 had a strong preference for the mesomorph (muscular) image. The 8- and 10-year-olds almost invariably chose the mesomorph image, while the endomorph was the least preferred body type. Staffieri's study demonstrated that youth as young as 6 years of age had a preferred body image.

Young and Avdzej (1979) studied 108 girls and boys in the third, fourth, and fifth grade using Staffieri's (1967) stimuli. Eighteen girls and eighteen boys from each grade were included in the sample. Adjectives written on 37 plain white 3" x 5" index cards were rated as positive, negative or neutral. Four situations including the following were then described with adjectives.

1. An obese boy obedient to a female adult
2. An obese boy disobedient to a female adult
3. A normal weight boy obedient to a female adult
4. A normal weight boy disobedient to a female adult

Overall, the study found that obese children are less preferred and suffer from more negative stereotypes than normal weight children. Children's behavior was the same under obedient or disobedient situations, but the normal-weight child was more preferred than the obese child.

Vincent and McCabe (2000) studied adolescent gender differences in a family, peer influences on body dissatisfaction, and weight loss. The participants of the study were 306 girls ranging in age from 11 to 17 years and 297 boys aged 11 to 18 years. The study used BMI, MBSRQ (Cash, 1994), the Parental Bonding Instrument (PBI) (Parker, Tupling, & Brown, 1997), and the Index of Peer Relations (IPR) scales (Hudson, 1982). The study found that girls were more likely to discuss weight loss with their mothers than boys, and there was a significant prediction for body dissatisfaction in girls.

Öberg and Tornstam, (1999) studied 3,000 Swedish men and women aged from 20 to 85 years to investigate body images among men and women of different ages. The results suggested that in all age groups, physical appearance is more important for women than for men. Among women, older respondents expressed a more positive body image. Younger women were found to be more influenced by cultural standards regarding the ideal body.

#### Media Influence on the Adolescent

Mass media refers to a variety of technologies, ranging from billboards to radio, but current theories and studies regarding body image emphasize visual media such as magazines and television. The thinness schema for girls includes beliefs such as beauty is a women's principal project in life and slenderness is crucial for success, because success means heterosexual attractiveness (Smolak & Murnen, 2001). In today's consumer culture, we are surrounded by pictures of slim, beautiful, young bodies and are constantly reminded that individuals who take care of their bodies stay healthier, live longer, maintain their figure, and look good (Öberg & Tornstam, 1999). Television, film,

and other visual media remind us that a slim and graceful body, with dimples in an attractive face, is the key to happiness—maybe even its essence (Featherstone, 1994). Thinness has become a symbol of beauty and also of professional success (Silverstein & Perdue, 1988).

Studies revealed what is considered beautiful in terms of a body, especially for women. In general, it is likely that females feel more media pressure to be attractive than do males because the media place more emphasis on female attractiveness (Ogletree et al., 1990).

Heinberg and Thompson (1995) studied the effects of televised body images of thinness and attractiveness on 138 white female college students. They viewed either appearance related commercials (thinness and attractiveness) or non appearance-related advertisements. Seventy- one participants were in the appearance video group, and 67 composed the non appearance video group. However, there were no significant differences between the groups in terms of age, weight, height, level of obesity, and hours of daily television viewing. Twenty advertisements for weight-loss products, beer, automobiles, fast food, make-up, and clothing were used for the appearance video group, while the non appearance group viewed advertisements for pain relievers, household cleaning products, and insurance policies.

The researchers found that advertisements for weight-loss products, beer, automobiles, fast food, make up, and clothing negatively affected body satisfaction among the respondents. In contrast, the non-appearance group respondents, who viewed advertisements of pain relievers, household cleaning products and insurance policies,

were more satisfied with their bodies. The study by Heinberg and Thompson (1995) demonstrated that the contents of media advertisements influenced thinking about thinness (“slim is beautiful”) because those body images used in beer, automobiles, fast food, make up, and clothing advertisements were what most women saw throughout their lives.

Levine, Smolak, and Hayden, (1994) studied body satisfaction, thoughts on being slender, and cues from parents, peers, and magazines. This study focused on 385 girls in grades 6 to 8 and aged 10 to 14 years. The study measured media influences, body dissatisfaction; nine female of drawings using a visual scale (provided by Cohn et al., 1987), parental influences, the parental investment in daughter’s shape scale (PARINV), and the girl’s perception of her mother’s investment in her own thinness scale (MOMTHIN;  $\alpha = .73$ ). The magazines *Teen*, *Sassy*, *Young Miss*, *Seventeen*, *Model*, *Glamour*, and *Vogue* were used for the study. The girls were asked about how important magazine advertisements were in influencing their body images. Body dissatisfaction was defined as the score for current shape minus the score of the ideal shape. A positive score meant that the girl perceived her current figure as being heavier than her ideal.

Seventy percent of the girls reported that they read the magazines frequently and that magazines were an important source of beauty and fitness information. Twenty-two percent of the girls who read the magazines regularly reported that fashion models in the magazines were role models.

In 2000, Bulck reported on a study of television and body images of 1,035 Flemish adolescents aged between 16 and 18 years in 48 schools. The participants were

51.6% girls and 46.4% boys. BMI and Ideal Body Mass Index (IBMI) were used in the study. Two activities studied were sports and going out to pubs, discos, cafés, cinema, or other such activities. The ideal body programs on TV included scenes of “beautiful people,” “ideal bodies,” and “thinness.”

The results showed that there was no relationship between television viewing or preferences for ideal body programs and personal body mass, although there was an indirect relationship between television viewing and obesity. Girls with high preferences for ideal body programs went out significantly more often and preferred a smaller BMI than girls who went out less often. The more girls preferred to watch ideal programs, the lower their ideal BMI and the less satisfied they were with their weight.

Thomsen (2002) studied 340 college women aged 18 to 25 years. This study focused on attitudes regarding BMI (Body Mass Index), body, weight, and beauty/fashion magazine reading to predict body shape and size concerns. The results demonstrated that beauty and fashion magazine reading about body shape concerns are mediated by beliefs about men’s expectations about women’s thinness.

#### Attractiveness

The majority of the studies showed that attractiveness is more important for girls than for boys. One recent book indicated that even babies have preferences regarding attractiveness. For example, they watched “attractive women” longer. Most of the studies showed that by age 7 years, and possibly earlier, children have acquired adult cultural perceptions of attractiveness.

Boys learn to view their bodies as a tool to master the environment, whereas girls learn that their bodies should be used to attract others (Stephens et al., 1994). Lerner, Orlos, and Knapp (1976) studied physical attractiveness, physical effectiveness, and self-concept in late adolescents (124 males and 218 females). The boys' mean age was 19.9 years and the girls' mean age was 19.3 years. The study used three scales;

- Scale 1 presented a list of 24 body characteristics for physical attractiveness
- Scale 2 showed bipolar dimensions such as mature-immature, capable-not capable
- Scale 3 was the same as Scale 1, but focused on physical effectiveness

The ratings of effectiveness and attractiveness by males were more similar to each other than for females. The self concepts of females were more highly correlated with physical attractiveness than physical effectiveness, while physical effectiveness was more closely correlated with males' self concept than physical attractiveness. The significant predictors of self concept of body parts for attractiveness and for effectiveness of females were face (14%), waist (4%), chest, teeth, and mouth. In another study Fisher (1986) reported that family members may influence body image and gender role identity by providing the first set of significant external criteria against which girls learn to evaluate themselves as women, an evaluation that necessarily includes an assessment of their physical adequacy.

This review of literature has discussed clothing deprivation or satisfaction; family and peer influences; the mother-daughter relationship, including clothing behavior and the mother-daughter relationship, body image and the mother-daughter relationship; adolescents and clothing, body image and body satisfaction; the influence of the media;

and adolescent attractiveness perceptions. These studies highlight the importance of clothing, clothing and appearance, clothing and social acceptance, peer influences, and media influences. However, these studies generally explored either a single topic of clothing, appearance, peer influences, and media influences or two to three topics such as clothing and appearance, clothing and social acceptance, or clothing and peer influences. Therefore, this study was designed to be as comprehensive as possible, treating all these topics together to examine their interaction with adolescent behavior and provide a deeper understanding of adolescent daughters' behaviors with their mothers.

## CHAPTER III. METHODOLOGY

This chapter provides an outline of the research methodology and addresses the research questions to be examined, questionnaires, a description of the recruiting procedures followed, research sessions, a description of the sample, data collection procedures, and the justification of the instruments. This chapter also addresses the purpose of this study, which was to explore the mother–daughter correlation and its relationship to the clothing behavior issues and body image satisfaction/ dissatisfaction of tween girls aged between 9 and 14 years.

### Sample Recruitment

A purposive sample was used for this study. The participants were recruited by an independent contractor, [TC]<sup>2</sup> (Textile/Clothing Technology Corporation), in Cary, North Carolina. [TC]<sup>2</sup> was used because it developed the 3D body scanner that was used in the research. Its facilities include space for scanning, trained personnel, and meeting rooms for focus groups. Potential subjects were asked to participate in the initial, exploratory phase of a larger study focusing on normal and plus-sized tween girls, ages 9 through 14 years, and their mothers. Recruitment was done through the mothers. They were told that the purpose of the research was to study clothing choices, apparel fit, and sizing for this adolescent age group. Those who agreed to participate were assigned the appropriate



time and place for the focus group based on the daughter's age and size of apparel worn. The sessions were held at [TC]<sup>2</sup>.

### Research Sessions

Each size and age group had its own session. Two Saturdays were used, each with two separate sessions (morning and afternoon), for a total of four sessions. Each session took about 2 hours. In the first part of the session, the mothers and daughters were scanned. They then separately completed questionnaires and the daughters constructed a collage of fashion magazines. Once the scanning, questionnaires, and collage were completed, the mothers and daughters participated in four separate group discussion sections.

Tween girls and their mothers underwent body-scanning in a 3D Scanner, developed by [TC]<sup>2</sup>. The body scan consisted of a digital photograph that was not harmful in any way. Subjects wore a cotton sports bra and snug-fitting shorts in a private changing area. Participants were then asked to fill out questionnaires, and the tween girls were asked to make a collage of their favorite outfit from fashion magazines and a catalog (a combined catalogue and magazine): *Teen Vogue*, *Limited Two*, *Lucky*, *Seventeen*, *Elle Girl*, *YM (Your Magazine)*, *Teen*, and *Cosmo Girl*. Mothers and daughters completed separate questionnaires that included Stunkard et al's. (1983) figure scale. Participants were not permitted to see one another's responses.

Subject pairs were assigned to normal and plus-sized groups according to the daughters' BMI scores. In recruitment, mothers were asked their daughters' heights and weights so that their BMI scores could be calculated. Group assignments were made according to the U.S. Center for Disease Control Prevention's guidelines for the dividing

line between normal and overweight adolescents. According to the U.S. Center for Disease Control Prevention, BMI is used differently with children than it is with adults (“BMI for Age,” 2005). In adolescents, body mass index is used to designate underweight, overweight, and at risk for overweight categories. Underweight is taken to be under the 5<sup>th</sup> percentile in BMI-for-age, at risk of overweight is between the 85<sup>th</sup> and 95<sup>th</sup> percentiles in BMI-for-age, and overweight is over the 95<sup>th</sup> percentile in BMI-for-age. For this study, the terms normal- and plus-size were used instead of underweight, overweight, and at risk for overweight. The subjects were divided into normal- and plus-size groups.

Subjects were also divided by age into two younger and two older tween groups. The resulting four groups of tween girls consisted of normal size age 9 to 11 years, plus size age 9 to 11, normal-size age 12 to 14 years, and plus-size age 12 to 14 years, with their mothers placed accordingly. The recruiting goal was to have eight to twelve girls in each group, as that number is preferred for focus group discussions.

### Research Questionnaires

The questionnaires used for the study were two different but related questionnaires for the mother and daughter participants. An explanation of the two questionnaires is as follows.

#### *Daughters' Questionnaire*

*Part I: Choosing clothes.* This section consisted of six questions related to clothing shopping behavior, influences on clothing decisions, and clothing deprivation. The questions were adopted from the Clothing Practice Survey in May (1982) which was aimed at 9- to 19-year-old boys and girls. The Clothing Practice Survey consists of 28

questions, and clothing decisions are an important component. The instrument for clothing purchase questions in this study was originally developed by Garrity (1976), Majka (1977), and Smith (1972).

*Part II: Fashion.* These questions related to fashion magazine reading and perceptions of self attractiveness. The fashion magazines included *Cosmo Girl*, *Elle Girl*, *Lucky*, *Seventeen*, *Teen*, *Teen Vogue*, and *YM*. The daughters were asked whether they read each of these magazines according to the following scale: 1 (read it regularly), 2 (glance through it sometimes), 3 (never read it). These magazines target tween and teen girls. The question was patterned after Levine et al.'s (1994) study of adolescent girls (grades 6 to 8), age 10 to 14 years, in which they looked at magazine reading to measure media influences using *Teen*, *Sassy*, *Young Miss*, *Seventeen*, *Model*, *Glamour*, and *Vogue*.

A question on what defines attractiveness consisted of 11 items including clothes, make-up, hair, slenderness, nails, shapeliness, fitness, nice smile, not being fat, jewelry, and good and clear skin. The scales were 5-point Likert scales, with a 1 indicating "Not at all Important," 3 indicating "Moderately Important," and 5 indicating "Very Important."

*Part III: Your girl friends.* This section consisted of four statements related to peer weight perception. The Peer Influence Scale (PEERDIET) was developed by Levine et al. (1994) and was aimed at 385 girls in grades 6 to 8, aged 10 to 14 years, to identify adolescent girls' perceptions of their friends' dieting, weight, and shape concerns. The PEERDIET scale is reported as having an alpha reliability of .73 in Levine et al. (1994).

*Part IV: Your family.* This section consisted of seven questions related to parental weight concern behavior (Levine et al., 1994). Two questions related to the mother's

current figure and the ideal figure for adult women used Stunkard et al.'s. (1983) nine female drawings and two questions about the daughter's image of her mother. The scale of Parental Investment in Daughter's Shape (PARINV) was developed by Levine et al. (1994) and was once again aimed at girls grades 6 to 8 and aged 10 to 14 years. PARINV consists of 4-items ( $\alpha = .80$ ) that measure adolescent girls' perception of the importance of slenderness to their mothers. The instrument features a 5-point Likert scale ranging from 1 (Not at all Important) to 5 (Very Important). High scores indicated a greater level of maternal investment in slenderness of their daughters. The MOMTHIN scale developed by Levine et al. (1994) consisted of three items ( $\alpha = .73$ ) assessing the daughter's perception of her mother's investment in her own thinness.

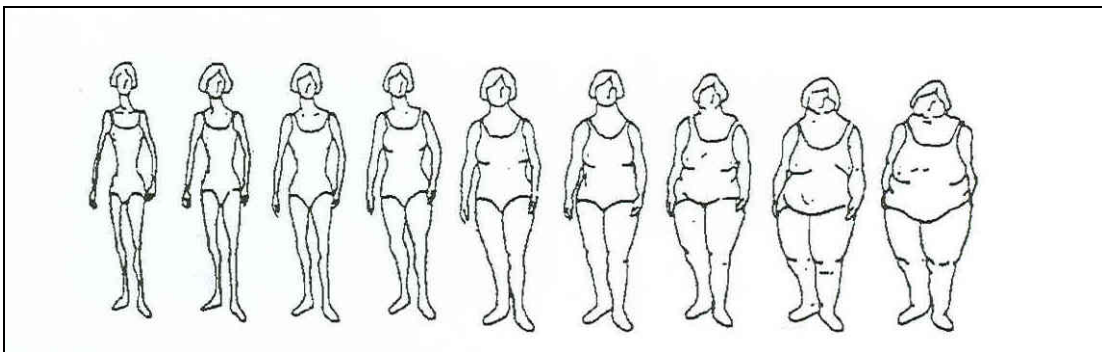
The questions regarding the daughter's perception of her mother were adapted from the MBSRQ (Cash, 1994). This scale ranged from (1) Very underweight to (5) Very overweight. These questions regarding the mother's image of herself were also used in mothers' questionnaires.

*Part V: Yourself.* This section used Stunkard et al.'s (1983) nine female drawings (Figure 3.) to ask about the daughter's own figure and the daughter's ideal figure, the satisfaction with body image scale (Blyth et al, 1985), and the ChEAT scale (Maloney, McGuire, Daniels, & Specker, 1989). The satisfaction with body image scale asked the daughters about their satisfaction with three aspects of their own bodies, namely height, weight, and figure development, using a 4-point scale ranging from (1) Not at all happy to (4) Very happy, and their overall look with a 4-point scale ranging from (1) Not at all good looking to (4) Very good looking.

Four questions of the ChEAT (Maloney et al., 1989) scale were used to measure the daughters' own weight concerns. This scale originally consisted of 26 items but was modified by Maloney et al. (1989) from the Eating Attitudes Test of Garner and Garfinkle (1979), which was felt to be too complicated for third or fourth grade children. The scale questions were answered with either yes or no.

Participants were shown the nine-figure scale of female body types developed by Stunkard et al. (1983), which is widely used to measure ideal body size and perception of body size. The instrument consisted of a series of nine drawings of nine female figures ranging from thin to heavy. Collins (1991) created a similar tool, but it was decided that Stunkard et al.'s (1983) scale was more appropriate for this study of mother-daughter pairs.

Cohn et al. (1987) found that for both girls and boys, ratings of the figure were strongly correlated with actual weight. These findings compare favorably with the results obtained in another study that validated the use of the Stunkard et al. silhouettes as a measure of adult body size (Mueller, Joos, & Schull, 1985).



*Figure 3.* Female body figure (Stunkard et al, 1983)

The Stunkard et al. (1983) body figure scale employed in this research has also been widely used in prior studies (Cohn et al., 1987; Fallon & Rozin, 1985; Wilson et al., 1994) and has been found to have acceptable reliability and validity.

### *Mothers' Questionnaire*

*Part I: Your Daughter's Clothes.* This section consisted of questions related to the mother's point of view on mothers' and daughters' shopping habits surrounding the daughters' clothes. Mothers were asked to identify what kinds of stores they use. Two sets of questions concerned payment for clothes and how easy it was to find clothes that the daughter liked and that fitted her. Finally, the mothers were asked what factors their daughters consider when deciding what to wear.

*Part II: Your Daughter's Development.* This section paralleled the questions on the daughters' questionnaire. Mothers were asked about their perception of attractiveness factors for their daughter's age. Stunkard et al.'s (1983) nine female drawings were presented and the mothers were asked about their perception of their daughters' current figure and ideal figure. Mothers were also asked about their daughters' body image satisfaction (Blyth et al., 1985), and weight concerns (Maloney et al., 1989).

*Part III: Yourself.* This section consisted of four categories: feelings about the participant's clothes (Pisut, 1998), fashion magazine reading, the body image questions using Stunkard et al.'s (1983) nine female drawings, and self classified weight and Body Area Satisfaction scales from the MBSRQ (Cash, 1994). The feelings about clothes were adopted from Pisut (1998); statements on the 5-point Likert scale related to the importance of being in fashion, pleasure related to buying clothes, representation of self to others, happiness with the purchases, and confidence in choices.

Like the daughters, mothers were asked to indicate how often they read fashion magazines (in their case, *Harper's Bazaar*, *Elle*, *Essence*, *In Style*, *Marie Claire*, *Vogue*, and *W*) according to the following scale: 1 (read it regularly), 2 (glance through it sometimes), or 3 (never read it). These magazines were appropriate to the participants' age. The Stunkard et al. (1983) drawings were used to enable the participants to rate their current figure and ideal figure.

Two questions regarding the mother's image of herself were adopted from the (MBSRQ) (Cash, 1994). The self-classified weight scale ranged from (1) very underweight to (5) very overweight. The Body Area Satisfaction Scale listed seven body features and overall appearance and measured satisfaction/dissatisfaction on a 5-point Likert scale. The body areas included face (facial features, complexion), hair (color, thickness, texture), lower torso (buttocks, hips, thighs, legs), upper torso (breasts, shoulders, arms), muscle tone, weight, height, and overall appearance. Because the MBSRQ was intended for use with adults and adolescents (15 years or older), it was not thought suitable for the daughters' questionnaire.

*Part IV: Demographics.* These questions covered age, marital status, ethnicity, the daughter's father's ethnicity, education level, occupation, and household income. The mothers were also asked for their daughter's age with birth month, grade, first menstrual period starting age, and number of siblings.

#### Analysis of Data

For the purposes of this study, the quantitative data obtained from the questionnaires were subjected to an in-depth data analysis to shed light on the relationship between mothers and daughters, clothing behavior issues, and body images

of tween girls aged 9 to 14 years. The body of the research addressed 14 questions. Two approaches were used to analyze the data gathered for this study; some research questions were analyzed by whole groups (mothers and daughters), while separate groups (normal-size and plus-sized daughters and their mothers or younger and older daughters and their mothers) were also studied.

*1. Is there a difference between mothers' perceptions of their daughters' body image and the daughters' self-defined body image?*

Stunkard et al.'s (1983) set of nine female drawings was used to address this research question. Mothers and daughters each picked one body size image (numbered 1-9). A paired sample *t* test was conducted for the analysis of mothers' perceptions of their daughters' body image and the daughters' self-defined body image. For further analysis, independent sample *t* tests were conducted for normal- and plus-size girls and their mothers. This was used to address the differences between normal- and plus-size mothers' perceptions of their daughters' body image and the daughters' self-defined body image.

*2. Is there a difference between daughters' perceptions of their mothers' body image and the mothers' self-defined body image?*

Stunkard et al.'s (1983) set of nine female drawings was again used for this research question. Mothers and daughters each picked one body size image (numbered 1-9).

A paired sample *t* test was conducted for using scores for daughters' perception of their mothers' body image and the mothers' self-defined image. For further analysis, independent sample *t* tests were conducted for normal- and plus-size girls and their



mothers to differences between normal- and plus-size daughters' perceptions of their mothers' body image and the mothers' self-defined body image.

*3. Is there a difference between mothers' identification of the ideal body size for themselves and their daughters' identification of the ideal body size for adult women?*

Stunkard et al.'s (1983) set of nine female drawings was used for this research question. Mothers and daughters each picked one body size image (numbered 1-9).

A paired sample *t* test was conducted for the analysis, pairing mothers' identification of the ideal body size for themselves and their daughters' identification of the ideal body size for adult women. For further analysis, independent sample *t* tests were conducted for normal- and plus-size daughters and their mothers to address differences between normal- and plus-size girls mothers' identification of the ideal body size for themselves, and their daughters' identification of the ideal body size for adult women.

*4. Is there a difference between daughters' identification of the ideal body size for themselves and their mothers' identification of the ideal body size for girls their daughters' age?*

Stunkard et al.'s (1983) set of nine female drawings was also used for this research question. Mothers and daughters each picked one body size image (numbered 1-9).

A paired sample *t* test was conducted for the analysis, pairing daughters' identification of the ideal body size for themselves and their mothers' identification of the ideal body size for girls their daughters' age. For further analysis, Independent Sample *t*-tests were conducted for normal- and plus-size girls and their mothers to address

differences between daughters' identification of the ideal body size for themselves and their mothers' identification of the ideal body size for girls their daughters' age.

*5. Is there a difference between mothers' and daughters' dissatisfaction with their own bodies?*

Stunkard et al.'s (1983) set of nine female drawings was once more used for this research question. A paired sample *t*-test was conducted for the analysis pairing mothers' and daughters' dissatisfaction with their own bodies. The body dissatisfaction scores for both mothers and daughters were determined by finding the difference between perception of actual size and identification of ideal size. For further analysis, independent sample *t* tests were conducted for normal- and plus-size daughters to examine differences between mothers' and daughters' dissatisfaction with their own bodies.

*6. Is there a difference between mothers' dissatisfaction with their daughters' bodies and daughters' dissatisfaction with their mothers' bodies?*

Stunkard et al.'s (1983) set of nine female drawings were used to address this research question. A paired sample *t*-test was conducted for the analysis, pairing mothers' dissatisfaction with their daughters' bodies and daughters' dissatisfaction with their mothers' bodies. The body dissatisfaction scores for the mothers' dissatisfaction with their daughters' bodies were determined by finding the difference between the mother's identification of the daughter's figure and the mother's ideal for daughter's age. The body dissatisfaction scores for the daughters' dissatisfaction with their mothers' bodies were determined by the daughter's identification of their mother's figure and the ideal figure for adult women. The mothers' and daughters' responses for the whole

group were compared to obtain this answer. In a further analysis, mother and daughter responses for normal size girls, and plus size girls were compared by using t-tests.

7. a. *Is there a relationship between the frequency of the mothers' fashion magazine readings and the mothers' rating of their own ideal figure?*

b. *Is there a relationship between the frequency of the daughters' fashion magazine readings and the daughter's rating of their own ideal figure?*

These research questions addressed the issue of exposure to fashion magazines and mothers' and daughters' ratings of ideal figures. This was not a matter of what fashion magazines they read; instead the score reflected how often they read any fashion magazines. The scores for ideal figure for both mothers and daughters were taken from their choices on Stunkard et al's. (1983) nine female figures (ranging from 1 to 9). The score for the fashion magazine readings ranged from *read it regularly* and *glance through it sometimes* to *never read it*, which were adapted to a scoring of 1=never, 2= sometimes, and 3= regularly. The fashion magazine reading scores were totaled for the whole score of fashion magazine readings to find the relationship between the ideal figure score and the fashion magazine reading score (for mothers and daughters separately). A Pearson Correlation and MANOVA were conducted for this analysis. The independent variables were frequency of daughters' and mothers' fashion magazine readings. The dependent variables were daughters' and mothers' rating of their ideal figures. Here, mothers' and daughters' responses were analyzed for the whole group.

8. *What are the differences among influentials (mother, father, sister, friend, self) in helping daughters decide what clothes to buy and wear?*

Each of the scales was scored from (1) Never to (5) Always for each of the influentials (see *Part I: Choosing Clothes.*). Descriptive statistics using the scoring for each question showed the relative importance among influentials (mother, father, sister, friend, self) in helping daughters decide what clothes to buy and wear. The daughters' responses for normal- and plus-size girls, and younger and older girls were compared by using the independent sample *t* test.

9. *Is there a relationship between mothers' and daughters' rankings of clothing decision factors for what to wear?*

In Part I: *Choosing Clothe*, the mothers and daughters were asked the importance of each of seven factors that revealed their interest in deciding what to wear. Descriptive statistics using the scoring for each question showed the relative importance of clothing decision factors for what to wear. For further analysis, independent sample *t* tests were conducted for normal- and plus-size, younger and older daughters and their mothers.

10. *Is there a relationship between girls' dissatisfaction scores and clothing decision factors of what clothes to wear?*

The daughters' body dissatisfaction scores were determined by finding the difference between their perception of actual size and identification of ideal size using Stunkard et al.'s (1983) drawings. Each decision factor was scored from 1 to 5. After looking at the whole sample, normal- and plus-size girls and younger and older girls were then compared separately.

Pearson Correlation Coefficients and MANOVA were conducted for the analysis.

The independent variable was the daughters' dissatisfaction score. The dependent variable was daughters' clothing decision factor scores of what clothes to wear.

*11. Do mothers correctly perceive their daughters' weight concerns?*

Mothers were asked the following parallel questions:

Has your daughter ever wanted to be thinner? Yes / No ...to be heavier? Yes / No

Have you ever wanted your daughter to be thinner? Yes / No...to be heavier? Yes / No

Has your daughter ever tried to lose weight? Yes / No ...to gain weight? Yes / No

Have you ever encouraged your daughter to lose weight? Yes/ No... to gain weight?

Yes /No

Daughters were asked the following questions:

Have you ever wanted to be thinner? Yes / No

Have you ever wanted to be heavier? Yes / No

Have you ever tried to lose weight? Yes / No

Have you ever tried to gain weight? Yes / No

As the scales were answered with either yes or no, a Non-parametric binominal test was conducted for this analysis to demonstrate the relationship between daughters' weight concerns and mothers' perceptions of their daughters' weight concerns.

*12. Is there a relationship between the daughters' perception of their own body image and their mothers' involvement?*

The mothers' involvement scores came from two items on the parental investment scale. Responses ranged from (1) Not at all concerned to (5) Very concerned in the daughters' questionnaire (*Part 4: Your Family*). The daughters' perception of body

image scores were summed from the 4-point Body Image scales about happiness with height, weight, development, and attractiveness (*Part 4: Your family*).

Pearson Correlation Coefficients and MANOVA were conducted for this analysis. The independent variables as predictors were mothers' involvement scales. The dependent variable was daughters' perception of body image.

*13. Is there a relationship between daughters' perceptions of their friends' weight concerns and their own body image?*

The friends' perception of weight concerns scores came from the PEERDIET scales, with scores ranging from (1) None to (5) All (*Part 3: Your Girl Friends*). The daughters' perceptions of body image scores were a sum of the Body Image scores in *Part 4: Your family*

Pearson Correlation Coefficients and MANOVA were conducted for this analysis. The independent variables as predictors were friends' perceptions of weight concerns. The dependent variable was daughters' perception of body image.

*14. Is there a relationship between daughters' body dissatisfaction and clothing deprivation?*

The clothing deprivation scores ranging from (1) Never to (5) Always were from the answer in *Part I: Choosing Clothes* related to selecting clothes for school, doing things with friends, and dress-up clothes. The score for each was totaled to provide a single deprivation score. The daughters' body dissatisfaction scores were determined by finding the difference between their perception of actual size and their identification of ideal size using Stunkard et al. (1983) figures.

Pearson Correlation Coefficients and MANOVA were conducted for this analysis. The independent variable predictor was clothing deprivation. The dependent variable was daughters' body dissatisfaction.

### Summary

This research aimed to explore in depth the mother–daughter bond and its relationship to clothing behavior issues and body image satisfaction/ dissatisfaction levels of tween girls. A purposive sample was used for this study. Two different but related questionnaires were used for mothers and daughters to answer the 14 research questions. The daughters' questionnaires used clothing purchase decisions, media influence, perception of attractiveness, peer weight concerns (PEERDIET), parental weight concern behavior ((PARINV, MOMTHIN), female size drawings (Stunkard et al., 1983), satisfaction with body image (Blyth et al., 1985), and own weight concern (ChEAT). The mothers' questionnaires used feelings about clothes (Pisut, 1998), media influence, female size drawings (Stunkard et al., 1983), satisfaction with body image (Blyth et al., 1985), weight concern (ChEAT), and Multidimensional Body Self Relations Questionnaire (MBSRQ) (Cash, 1994).

## CHAPTER IV. PRESENTATION AND ANALYSIS OF DATA

The purpose of this study was to explore the relationship of tween girls (aged 9 to 14 years) and their mothers regarding clothing behavior issues, body image, and body satisfaction. This chapter presents the results of the data analyses, including a discussion of the reliability and validity of the instrument, sample description, the statistical procedures performed for each research question, and the specific results of the analyses. The research questions were analyzed using the group as a whole, and BMI (Body Mass Index) was used to define normal- and plus-size respondents, and age was used to define the younger and older participants in the study.

### Sample Description

Forty-one mother-daughter pairs participated in this study. The sample consisted of 21 normal-size and 20 plus-size daughters and their mothers. The girls were divided into four focus groups: normal-size younger and older, and plus-size younger and older. Table 1 shows the group demographics. The normal-size older group consisted of 11 girls between 12 and 14 years; the plus-size older group consisted of 11 girls between 12 and 14 years. The normal-size younger group consisted of 10 girls between 9 and 11, and the plus-size younger group consisted of nine girls between 9 and 11 years. Sixty-one percent of the girls were Caucasian; 29.3% were African American; 2.4% were Hispanic, and 2.4% were Native American.



Table 1

*Girls' Ages by Focus Group*

Group	Number	Percentage	Mean Age Years old (months)
Whole group	41	100	12 (144.02 months)
Normal older	11	26.8	13.29 (159.45 months)
Normal younger	10	24.4	10.12 (121.40 months)
Plus-size older	11	26.8	13.55 (162.55 months)
Plus-size younger	9	22	10.64 (127.67 months)
Total	41	100	

The mean age for all the girls was 12 years (144.02 months), and the mothers' mean age was 41.63 years. The older normal-size group's mean age was 13.29 years, and the older plus-size group's mean age was 13.55 years. The younger normal-size group's mean age was 10.12 years, and the younger plus-size group's mean age was 10.64 years.

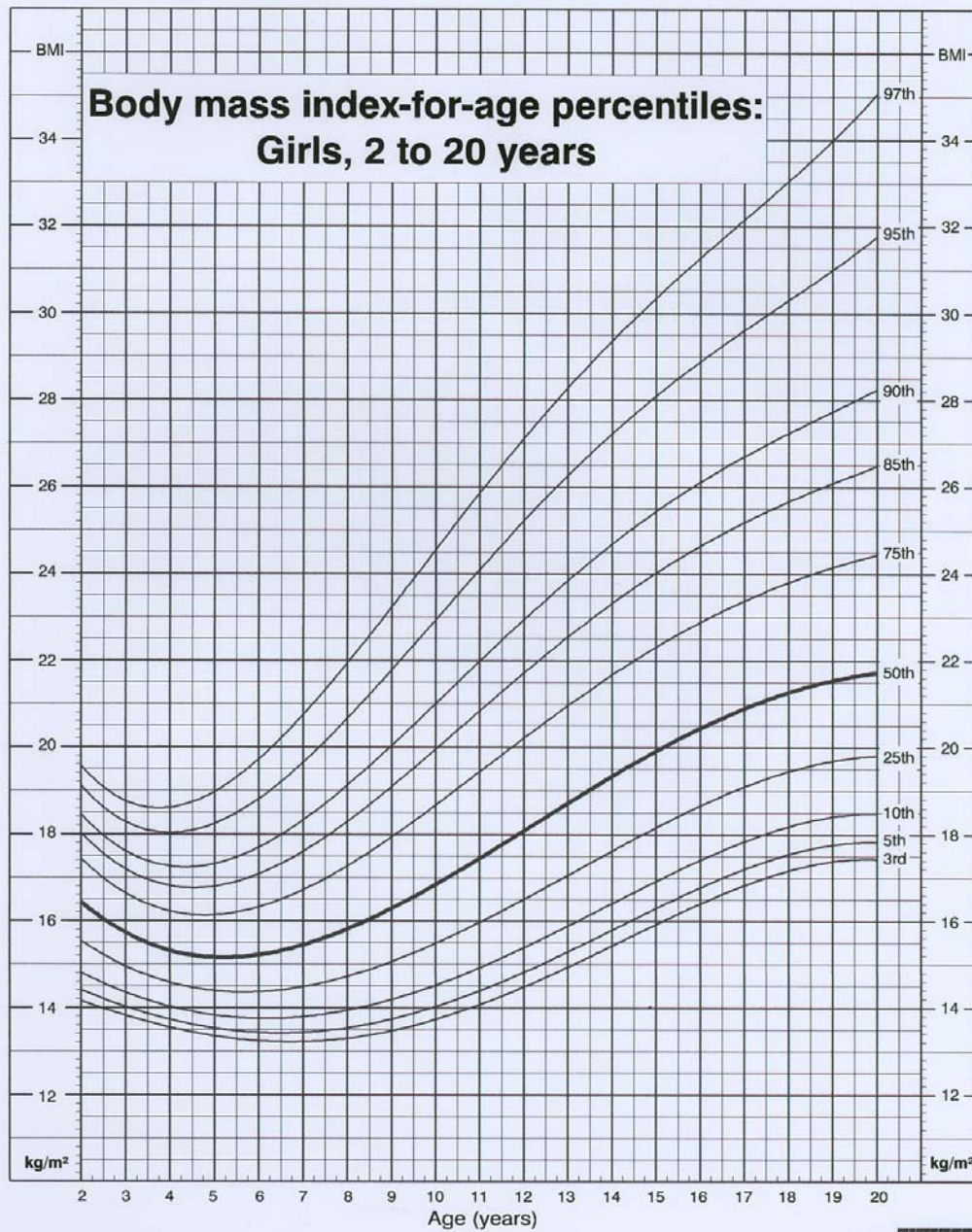
Table 2

*Tween Girls' BMI*

Group	Number of girls	Percentage	Mean BMI
Whole group	41	100	23.35
Normal older	11	26.8	19.09
Normal younger	10	24.4	17.68
Plus-size older	11	26.8	29.44
Plus-size younger	9	22	27.40
Total		100	

BMI is calculated by taking the individual's weight in kilograms and dividing it by the square of their height in meters. The mean BMI for all the girls was 23.35. The mean BMI of the participants in each of the four groups is shown in Table 2. The mean BMI of the normal older group was 19.09, while that of the normal younger group was 17.68. The difference between the BMI for older and younger normal tween girls was 1.41. The mean BMI of the plus-size older girls was 29.44. The mean BMI of the plus-size younger group was 27.40. The difference between the plus-size older and younger girls' BMI was 2.04.

### CDC Growth Charts: United States



Published May 30, 2000.  
SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).



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Figure 4. CDC (Center for Disease Control and Prevention) Growth Charts: United States

Figure 4 shows BMI for age percentiles from the 3<sup>rd</sup> to 97<sup>th</sup> percentile. Age is a factor that should consider when assessing BMI.

Table 3

*CDC BMI Range By Age*

Age	BMI range under the 5 <sup>th</sup> percentile	BMI range 6 <sup>th</sup> to 84 <sup>th</sup> percentile	BMI range 85 <sup>th</sup> to 94 <sup>th</sup> percentile	BMI range over the 95 <sup>th</sup> percentile
9	Up to 13.6	13.7- 19.1	19.2 – 21.8	Over 21.9
10	Up to 14.0	14.1 – 20.0	20.1 – 23.0	Over 23.1
11	Up to 13.9	14.0 - 20.8	20.9 – 24.1	Over 24.2
12	Up to 14.8	14.9 - 21.6	21.7 – 25.2	Over 25.3
13	Up to 15.2	15.3 - 22.6	22.7 – 26.2	Over 26.3
14	Up to 15.8	15.9 - 23.2	23.3 – 27.2	Over 27.3

Table 3 shows the range of BMI scores for children for the four categories delineated by the CDC. Underweight is under the 5th percentile in BMI-for-age, normal is the 5<sup>th</sup> to 84<sup>th</sup> percentile, at risk of overweight is between the 85th and 94th percentiles in BMI-for-age, and overweight is over the 95th percentile in BMI-for-age. For this study, the terms normal- and plus-size were used instead of normal, overweight, and at risk for overweight. The subjects were divided with normal up to the 84<sup>th</sup> percentile and plus-size groups above that.

Table 4

*BMI Range for Sample By Age*

Age	BMI range 6 <sup>th</sup> to 84 <sup>th</sup> percentile	BMI range 85 <sup>th</sup> to 94 <sup>th</sup> percentile	BMI range over the 95 <sup>th</sup> percentile
9	14.6 – 18.9 (4)		31.4 (1)
10	17.1 -19.5 (3)	20.1 -23.0 (3)	27.3 – 39.8 (3)
11	16.6 – 20.0 (3)	20.8 (1)	30.2 (1)
12	17.7 – 18.9 (4)	24-24.1 (2)	31.2 (1)
13	17.6 – 21.8 (4)	23.9 – 26.2 (3)	
14	18.2 – 20.4 (3)	24.5 – 27 (2)	38.4- 43.3 (3)
Total	21	11	9

The sample was recruited and divided into groups based on mothers reporting their daughters' height and weight to calculate BMI. However, in one instance, a girl was pre-assigned in a plus-size group who was actually at the top of the normal (84<sup>th</sup>) percentile. Table 4 shows the number of subjects in each BMI category. None of the girls were under the 5<sup>th</sup> percentile (underweight). Twenty-one girls were in the 6<sup>th</sup> to 84<sup>th</sup> percentile (normal size). Twenty girls were considered to be plus-size (85<sup>th</sup> to 94<sup>th</sup> percentile, or at risk of overweight, and over the 95<sup>th</sup> percentile, overweight).

Table 5

*BMI Range for Normal-Size Tween Girls*

BMI range	Normal younger girls percentage	Normal older girls percentage
14.6 – 16.6	30	
17.1 – 17.8	30	18.2
18.2 – 18.9	10	45.5
19.1 – 19.7	20	9.1
20.0 – 20.9	10	27.3
	100	100

The range of respondents' BMI for the normal younger and older tween girls is shown in Table 5. The normal-size girls' BMI scores ranged from 14.6-20.9. The mean BMI of the normal-size younger tween girls was 17.68 (Table 2). BMI for the majority of younger girls in the normal group (60%) ranged between 14.6 and 17.8; 10% ranged between 18.2 and 18.9, and 30% ranged between 19.1 and 20.9. The mean BMI for older tween girls in the normal group was 19.09 (Table 2). The majority of these respondents (63.7%) ranged between 17.1 and 18.9; 36.4% of the BMI ranged between 19.1 and 20.9 BMI. There were no respondents in the 14.6 - 16.6 BMI range among the normal older girls.

Table 6

*BMI Range for Plus-Size Tween Girls*

BMI range	Plus-size younger girls percentage	Plus-size older girls percentage
20.8 – 20.9	22.2	
21.8 – 23.9	22.2	18.2
24.0 – 24.5		27.3
26.2 – 27.3	11.1	18.2
30.2 – 32.2	33.3	9.1
38.4 – 43.3	11.1	27.3
	100	100

The range of respondents' BMI for the plus-size younger and older girls is shown in Table 6. The mean BMI of the plus-size younger tween girls was 27.4 (Table 2). Approximately 56% of the respondents among the plus-size younger girls had BMIs that ranged from 26.2 to 43.3. Forty four percent of the BMIs ranged between 20.8 to 23.9; 27.3 % of older plus-size girls were within the 24 to 24.5 BMI range. The mean BMI of plus-size older girls was 29.44 (Table 2). The majority of the respondents (55 %) ranged between 26.2 and 43.3 BMI, with 45 % of the older plus-size girls' ranging from 21.8 to 24.5.

Table 7

*Girls' Grade in School*

Grade	Frequency	Percentage
4	7	17.1
5	8	19.5
6	4	9.8
7	8	19.5
8	6	14.6
9	7	17.1
10	1	2.4
Total	41	100

The girls' grades ranged from the 4<sup>th</sup> to the 10<sup>th</sup>. Tween girls in the sixth grade were slightly under-represented. As shown in Table 7, 53.6 % of the girls were in the 7<sup>th</sup> to the 10<sup>th</sup> grade range, and 46.4 % were in the fourth through the sixth grade. Only one girl was in the 10<sup>th</sup> grade.



Table 8

*Menarche*

	Frequency	Percentage
Had begun menstruating	19	46.3
Had not begun menstruating	22	53.7
Total	41	100

Table 8 shows that approximately 46% of the daughters had had their first period prior to the study, whereas 54% of daughters had not. Table 9 depicts the first menarche start age for each group. As shown in Table 9, none of the girls had started their first period at age 9 or 14 years. None of the normal-size younger girls had begun menstruating. However, Table 9 shows that two (22.2%) of the younger plus-size girls had had their first periods at age 10.

Table 9

*First Period Start Age By Group*

Age	Normal Older Frequency (%)	Plus Younger Frequency (%)	Plus Older Frequency (%)	Total Frequency (%)
10		2 (22.2)	1 (9.1)	3 (15.79)
10.50	1 (9.1)			1 (5.26)
11	1 (9.1)		5 (45.5)	6 (31.58)
12	1 (9.1)			1 (5.26)
12.50	4 (36.4)		1 (9.1)	5 (26.32)
13	1 (9.1)		2 (18.2)	3 (15.79)
Total	8 (72.7)	2 (22.2)	9 (81.9)	19 (100)

Among normal older girls, 72.7% had had their first period. Approximately 36% of normal older girls started their first period at age 12.50. Among the plus-size older girls, 81.9% had begun menstruating. Forty six percent of the plus-size older girls had their first period at age 11. Overall, the plus-size older girls started their first period earlier than the normal-size older girls. Approximately 32% of the girls in the whole sample had started their first period at age 11.

Table 10

*Ethnicity*

Ethnicity	Daughter	Mother	Father
	Frequency (percentage)		
Caucasian	25 (61)	23 (56.1)	23 (56.1)
African American	12 (29.3)	9 (22)	11 (26.8)
Hispanic	1 (2.4)	-	-
Native American	1 (2.4)	1 (2.4)	1 (2.4)
Other	1 (2.4)	1 (2.4)	-
Missing/Not Applicable	1 (2.4)	7 (17)	6 (14.6)
Total	41 (100)	41 (100)	41 (100)

Table 10 shows that a majority of adolescents in this study were Caucasian (61%), with African Americans being next highest (29.3%). Other ethnicities, including Hispanic and Native American, accounted for the rest of the sample (9.6%). Two girls were biracial. Mothers' and daughters' ethnicity varied. The majority of mothers in this study were either Caucasian (56.1%) or African American (22%).

Table 11

*Girls' Siblings*

Siblings	Frequency	Percentage
No Siblings	7	17.1
Sister(s), but no brother	17	41.5
Brother (s), but no sister	10	24.4
Sister(s) & brother(s)	7	17.1
Total	41	100

As shown in Table 11, seven girls in the study had no siblings. Seventeen of the participants had at least one sister and no brothers. Among the 17 participants who had a sister, most (51.2%) had one sister; two had two sisters, and one had four sisters. Ten participants had only brothers and no sisters, and seven had both sisters and brothers.

Table 12

*Mothers' Marital Status*

Marital Status	Frequency	Percentage
Married	32	78.1
Divorced	6	14.6
Single	2	4.9
Missing/Not Applicable	1	2.4
Total	41	100

As shown in Table 12, the majority of the mothers (78.1%) in this study were married. About 20% were either single or divorced.

Table 13

*Mothers' Occupations*

Occupation	Frequency	Percentage
Professional (Lawyer, Accountant, Teacher)	13	31.7
Homemaker	10	24.4
Upper management/Proprietor/Owner	4	9.8
Salesperson	3	7.3
Service Worker	2	4.9
Middle management	2	4.9
Other	6	14.6
Missing/Not Applicable	1	2.4
Total	41	100

Table 13 summarizes the distribution of occupations of the mothers who participated in this study. Professional categories (lawyer, accountant, teacher) made up 31.7%, followed by homemaker (24.4%) and other (14.6%). Upper management, proprietor, and owner made up 9.8% of mothers' occupations. Together, salesperson, service worker, and middle management made up 17.1%.

Table 14

*Mothers' Education*

Education	Frequency	Percentage
Master's degree	5	12.2
Bachelor's degree	15	36.6
Associate's degree	6	14.6
Some College, No Degree	8	19.5
High school diploma/GED	6	14.6
Missing	1	2.4
Total	41	100

As shown in Table 14, 48.8% of the mothers in this study had either bachelor's or master's degrees. About the same percentage of mothers had some level of college, an associate degree, or a high school education.

Table 15

*Family Income*

Income	Single Frequency (percentage)	Dual Frequency (percentage)
Under \$24,999	2 (4.9)	
\$25,000 - \$49,999	2 (4.9)	2 (4.9)
\$50,000 - \$74,999	3 (7.3)	3 (7.3)
\$75,000 - \$99,999	3 (7.3)	5 (12.1)
\$100,000- \$149,999	2 (4.9)	10 (24.4)
Over \$150,000	2 (4.9)	3 (7.3)
Missing / not applicable		4 (9.8)
Total	14 (34.2)	27 (65.8)

Table 15 summarizes the participants by family income. Fourteen mothers (34.3%) had a single family income. Twenty- three mothers (56%) had a dual family income. More than 60.9 % of participants had a family income of more than \$75,000. More of the single income families (9.8 %) were below \$49,999 compared to the dual income families, of whom only 12.2% earned below \$74,999.

Reliability and Validity of Analysis

The reliabilities of three of the scales (PEERDIET, MOMTHIN and PARINV) used in this study have been reported in the literature. The PEERDIET scales were applied in Research Question 13 to understand the relationship between friends' perceptions of weight concerns and girls' perceptions of body image. Reliability for the



PEERDIET scales yielded a Cronbach alpha of .72, indicating an acceptable internal consistency for this study. The alpha value is similar to the alpha of .73 reported in Levine et al. (1994).

Reliability analyses were also conducted for PARINV scales in the girls' questionnaire. The PARINV scales were used to answer Research Question 12 to elucidate the relationship between girls' perceptions of body image and mothers' involvement in their daughters' image. Reliability analysis on the PARINV scales indicated a high internal consistency, with a Cronbach alpha of .80. This reliability of PARINV is the same as that reported in the previous study by Levine et al. (1994), who reported an alpha of .80.

Reliability analysis of the magazine scales for the daughters' questionnaire yielded a Cronbach alpha value of .93, indicating a high internal consistency in this study. The tween girls' magazine scales were used to respond to Research Question 7, exploring the relationship between the frequency of girls' fashion magazine reading and their ratings of an ideal figure. Reliability analysis of the magazine scales for the mother's questionnaire yielded a Cronbach alpha of .78, also indicating an acceptable level of internal consistency for this study. The mothers' magazine scale responses were applied to respond to Research Question 7, which explored the relationship between the frequency of mothers' fashion magazine readings and mothers' ratings of their ideal figure.

## Analysis of Research Questions

*Research Question 1: Is there a difference between mothers' perceptions of their daughters' body image and the daughters' self-defined body image?*

To analyze this research question, paired sample *t* tests were performed to determine if there was a difference between mothers' perceptions of their daughters' body image and the daughters' self-defined body image. The Stunkard et al. (1983) set of nine female drawings (from smaller to larger size, numbered 1-9) was used as a stimulus. Mothers picked the number of the female figure that represented their perception of their daughters' body. Daughters used the same visual aids to identify the number representing their own body image.

Table 16

*Daughters' Self Identification and Mothers' Identification of Daughters Body Type*

	All (N=41/41) Mean	Normal (N=21/21) Mean	Plus-size (N=20/20) Mean
Daughters' self-identification	3.8	3.24	4.35
Mothers' identification of daughter	3.98	2.90	5.10
<i>p</i> value	0.25	0.06	0.005**

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \* $p \leq 0.05$*

Table 16 shows the mean scores and *p* values. Overall, the paired sample *t*-test was not statistically significant for mothers' perceptions of their daughters' body image (3.98) and their daughters' self-defined body image (3.8). To explore the relationships between the normal-size daughters' self-defined body image and their mothers' perception of their daughters' body image, another paired sample *t* test was computed, which was also not statistically significant. However, the difference between the plus-size daughters' self-identification (4.35) and their mothers' identification of their

daughters' body image (5.10) was highly statistically significant, at  $p=0.005$ . Therefore, there appears to be a significant difference between how plus-size girls see themselves and how their mothers see them, with the mothers seeing them as larger.

*Research Question 2: Is there a difference between daughters' perceptions of their mothers' body image and the mothers' self-defined body image?*

To analyze this research question, paired sample  $t$  tests were performed to determine if there was a difference between daughters' perceptions of their mothers' body image and the mothers' self-defined body image. Once again Stunkard et al.'s (1983) nine female drawings were used as stimuli. Daughters picked a numbered image to represent their perception of their mothers' body, and mothers picked one to self-define their own body image.

Table 17

*Mothers' Self-Identification and Daughters' Identification of Mother's Body Type*

	All (N=41/41) Mean	Normal-size (N=21/21) Mean	Plus-size (N=20/20) Mean
Mother's self-identification	4.71	3.83	5.62
Daughter's identification of mother	4.80	4.33	5.30
<i>p</i> value	0.58	0.02*	0.25

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$*

As shown in Table 17, the paired sample  $t$  test was not statistically significant between all daughters' perceptions of their mothers' body image (4.80) and their mothers' self-identified body image (4.71). To explore the relationships between (a) normal-size daughters' perceptions of their mothers' body image and their mothers' self-defined body image, and (b) plus-size daughters' perceptions of their mothers' body

image and their mothers' self-defined body image, separated paired sample *t* tests were computed. As Table 17 shows, there was a statistically significant difference between normal-size daughters' perceptions of their mothers' body image (4.33) and their mothers' self-defined body image (3.83), but not between plus-size daughters' perceptions of their mothers' body image (5.30) and their mothers' self-defined body image (5.62). Normal-size daughters perceived their mothers to be larger than their mothers saw themselves.

*Research Question 3: Is there a difference between mothers' identification of the ideal body size for themselves and their daughters' identification of the ideal body size for adult women?*

To analyze this research question, paired sample *t* tests were performed to determine if there was a difference between mothers' identification of the ideal body size for themselves and their daughters' identification of the ideal body size for adult women.

Table 18

*Mother's Ideal for Self and Daughter's Ideal for Adult Women*

	All (N=41/41) Mean	Normal-size (N=21/21) Mean	Plus-size (N=20/20) Mean
Mother's ideal for self	3.49	3.19	3.80
Daughter's ideal for adult women	4.06	4.11	4.03
<i>p</i> value	0.01*	0.009*	0.48

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \* $p \leq 0.05$*

The results in Table 18 show that the paired sample *t* test was statistically significant at  $p=0.01$  between all mothers' identification of the ideal body size for

themselves (3.49) and their daughters' identification of the ideal body size for adult women (4.06). Thus, girls' ideal for adult women was larger than the mothers' ideal for themselves.

To explore the relationships between (a) the mothers of normal-size daughters identification of the ideal body size for themselves and their daughters' identification of the ideal body size for adult women, and (b) the mothers of plus-size daughters identification of the ideal body size for themselves and their daughters' identification of the ideal body size for adult women, separate paired sample *t* tests were computed. As shown in Table 18, there was a statistically significant difference between the mothers of normal-size daughters identification of the ideal body size for themselves (3.19) and their daughters' identification of the ideal body size for adult women (4.11), at 0.009.

Although the plus-size daughters also had a larger ideal for adult women than their mothers did, the difference was not significant. This contrasts with the finding for normal-size daughters.

*Research Question 4: Is there a difference between daughters' identification of the ideal body size for themselves and their mothers' identification of the ideal body size for girls of their daughters' age?*

To analyze this research question, paired sample *t* tests were performed to determine if there was a difference between daughters' identification of the ideal body size for themselves and their mothers' identification of the ideal body size for girls their daughters' age. Table 19 shows that the paired sample *t* tests were not statistically significant for all subjects, those in the normal-size group, or those in the plus-size group.

Table 19

*Daughter's Ideal for Self and Mother's Ideal for Girls Their Daughter's Age*

	All (N=41/41) Mean	Normal-size (N=21/21) Mean	Plus-size (N=20/20) Mean
Daughter's ideal for self	3.15	3.07	3.22
Mother's ideal for girls the daughter's age	3.02	2.86	3.20
<i>p</i> value	0.43	0.29	0.91

*Research Question 5: Is there a difference between mothers' and daughters' dissatisfaction with their own bodies?*

To analyze this research question, a paired sample *t*-test was performed to determine if there was a difference between mothers' and daughters' dissatisfaction with their own bodies. The mothers' body dissatisfaction scores were determined by finding the difference between the mothers' identification of their ideal size and their perception of their actual size using Stunkard et al.'s (1983) drawing numbers. The daughters' body dissatisfaction scores were determined in the same way. A positive score for body dissatisfaction signifies that the identification of ideal size was bigger than the perception of actual size, while a score of zero means that actual size and ideal size were the same, in which case there was no body dissatisfaction. A negative score for body dissatisfaction signifies that the identification of ideal size was smaller than the perception of actual size.

Table 20

*Daughters' and Mothers' Dissatisfaction with Self*

	All (N=41/41) Mean	Normal-size (N=21/21) Mean	Plus-size (N=20/20) Mean
Daughter's dissatisfaction with self	-0.63	-0.17	-1.13
Mother's dissatisfaction with self	-1.22	-0.64	-1.83
<i>p</i> value	0.002***	0.08	0.01**

*Note.* Significant *p* values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$

As shown in Table 20, the paired sample *t* test showed a statistically significant difference ( $p=0.002$ ) between all mothers' (-1.22) and all daughters' dissatisfaction with their own bodies (-0.63). To explore the relationship between (a) normal-size daughters' and their mothers' dissatisfaction with their own bodies and (b) plus-size daughters' and their mothers' dissatisfaction with their own bodies, separate paired sample *t* tests were computed. The results, shown in Table 20, reveal that there was a statistically significant difference ( $p = 0.01$ ) between plus-size daughters' dissatisfaction with their own bodies (-1.13) and their mothers' dissatisfaction with their own bodies (-1.83), but not between normal-size daughters (-0.17) and their mothers (-0.64). Overall, mothers were more dissatisfied than their daughters, and the mothers of plus-size girls were more dissatisfied than their daughters. Although these findings were significant, the mothers of normal-size girls were not significantly more dissatisfied than their daughters.

*Research Question 6: Is there a difference between mothers' dissatisfaction with their daughters' bodies and daughters' dissatisfaction with their mothers' bodies?*

To analyze this research question, paired sample *t* tests were performed to determine if there was a difference between mothers' dissatisfaction with their daughters'

bodies and daughters' dissatisfaction with their mothers' bodies. The scores for mothers' dissatisfaction with their daughters' bodies were determined by finding the difference between the mothers' ideal for their daughters' age and the mothers' identification of their daughters' figure. The body dissatisfaction scores for daughters' dissatisfaction with their mothers' bodies were determined by the daughters' choice of an ideal figure for adult women and the daughters' identification of their mothers' figure.

Table 21

*Daughters' and Mothers' Dissatisfaction with Each Other's Body*

	All (N=41/41)	Normal-size (N=21/21)	Plus-size (N=20/20)
Daughter's dissatisfaction with mother	-0.74	-0.24	-1.27
Mother's dissatisfaction with daughter	-0.95	-0.05	-1.90
<i>p</i> value	0.40	0.6	0.09

Table 21 shows that the paired sample *t tests* were not statistically significant between all mothers' dissatisfaction with their daughters' bodies (-0.95) and all daughters' dissatisfaction with their mothers' bodies (-0.74). This also was true for the comparison of normal-size girls and their mothers and plus-size girls and their mothers.

*Research Question 7a: Is there a relationship between the frequency of the mothers' fashion magazine readings and the mothers' rating of their own ideal figure?*

To analyze this research question, Pearson's correlation was computed to determine if there was a relationship between the frequency of mothers' fashion magazine readings and their rating of their ideal figure. Mothers' frequency scores for reading fashion magazines were totaled to create a fashion magazine readings score, which was then compared to the mother's ideal figure scores.



Table 22

*Other Magazines Read By Mothers*

Magazine Category	Magazine Title
Health	<i>National Health, Prevention</i>
Fitness or Exercise	<i>Self</i>
Parenting	<i>Parenting, Family Circle</i>
Cooking	<i>Cooking Light</i>
Women	<i>Good Housekeeping, Women First, Ladies Home Journal, Redbook, Woman's Day, Southern Living</i>
Sports	<i>Tennis</i>
Fashion/ beauty	<i>Allure, Glamour</i>
Other interest	<i>People, O, BH +G, Grace, Us, First For Women, Chatelaine, Ebony</i>

Frequency scores came from a list of magazines including *Harper's Bazaar, Elle, Essence, In Style, Marie Claire, Vogue, and W.*

The participants were also asked to list any other fashion magazines they read, and these are listed in Table 22. However, because the listing of additional magazines was inconsistent, these results were excluded from the data analysis. The possible score for each fashion magazine was 1 (never read it), 2 (glance through it sometimes), or 3 (read it regularly). Seven fashion magazines were included, so the lowest possible score for fashion magazine readings was 7 and the maximum score was 21.

Table 23

*Mean of Mothers' Ideal Self and Fashion Magazine Readings*

	Mean	Std. Deviation
Mother's ideal for self	3.49	0.870
Mothers' fashion magazine readings	8.82	2.33487

As Table 23 shows, the mean for mother's ideal for self was 3.49 and the mean of their fashion magazine readings was 8.82. There was a negative relationship between magazine reading and ideal figure, but it was not statistically significant ( $r = -0.036$ ,  $p = 0.8$ ). Therefore, the frequency of mothers' fashion magazine readings and mothers' ratings of their ideal figure were not related in this study.

To explore if there were any different findings for specific groups, namely mothers of normal- and plus-size girls and mothers of younger and older girls, for the relationships between frequency of fashion magazine readings and rating of ideal figure, MANOVA (Multivariate Data Analysis) was conducted. The independent variables used as predictors were the groups mothers of normal- and plus-size daughters, and mothers of younger and older daughters. The dependent variables were frequency of mothers' fashion magazine readings and mothers' ratings of their ideal figure. The analysis revealed no statistically significant relationships for any of the groups.

*Research Question 7b: Is there a relationship between the frequency of daughters' fashion magazine readings and the daughters' rating of their own ideal figure?*

To analyze this research question, Pearson's correlation was computed to determine if there was a relationship between the frequency of daughters' fashion magazine readings and the daughters' rating of their ideal figure. Daughters' frequency scores for reading fashion magazines were totaled to create a fashion magazine readings

score which was related to the daughters' ideal figure scores. The frequencies came from a list of magazines including *Cosmo Girl*, *Elle Girl*, *Lucky*, *Seventeen*, *Teen*, *Teen Vogue*, and *YM*. The participants were asked to list any other magazines they read, and these are given in Table 24. Because the listing of additional magazines was once again inconsistent, they were also excluded from the data analysis. However, it is interesting to note that the list in Table 24 includes *Vogue* and *Essence*, which were included in the mothers' fashion magazines.

Table 24

*Other Magazines Read By Daughters*

Magazine Category	Magazine Title
News	<i>Time, ESPN</i>
Home	<i>Martha Stewart, M,</i>
Sports	<i>Hockey Digest, J-14, M, Surf, Snow, Skates Girl, Trans World surf, Euro Sport, Kids Sport Illustrated</i>
Fashion	<i>Vogue, Essence</i>
Other interest	<i>American Girl, Jet, Marie Claire, Alloy, All About Dogs, Cheerleader, AG, Family Fun, Discovery Girl, People, Teen People, Limited Two, Smithsonian</i>

The possible score for each fashion magazine was 1 (never read it), 2 (glance through it sometimes), or 3 (read it regularly). There were seven magazines; the lowest possible score for fashion magazine readings was 7 and the maximum score was 21.

Table 25

*Mean of Daughters' Ideal for Self and Fashion Magazine Readings*

	Mean	Std. Deviation
Daughters' ideal for self	3.15	.800
Daughters' fashion magazine readings	10.10	2.84470

As shown in Table 25, the mean of daughter's ideal for self was 3.15, and the mean of their fashion magazine readings were 10.10. The correlation was not statistically significant.

To explore normal- and plus-size and younger and older girls' relationships between frequency of their fashion magazine readings and ratings of ideal figure, MANOVA (Multivariate Data Analysis) was conducted. The independent variables as predictors were the groups, younger and older and normal- and plus-size girls. The dependent variables were frequency of daughters' fashion magazine readings and the girls' ratings of their ideal figure. However, once again there were no statistically significant relationships for any of the groups.

*Research Question 8: What are the differences among influentials (mother, father, sister, friend, self) in helping daughters decide what clothes to buy and wear?*

To analyze this research question, descriptive statistics were performed to determine if there was a difference among influentials (mother, father, sister, friend, self) in helping daughters decide what clothes to buy and to wear. Girls indicated the influence on a five- point scale, where one meant never, three meant about half of the time and five meant always for each of the individuals (mother, father, sister, friend, self).

Table 26

*Girls' Perception of Influentials' Frequency of Help in Deciding What Clothes To Buy*

	Mother (%)	Father (%)	Sister (%)	Friend (s) (%)	By Myself (%)
Always	24.4	0	2.4	2.4	4.9
Usually	51.2	2.4	22	12.2	48.8
Half of the time	12.2	12.2	7.3	31.7	29.3
Almost Never	9.8	39	7.3	29.3	12.2
Never	2.4	46.3	39	22	4.9
Missing/Not applicable				2.4	
Total	100	100	100	100	100

As shown in Table 26, 75.6% of the daughters answered *usually* or *always* regarding their mothers' help in deciding what clothes to buy. Approximately half (53.7%) said they decided by themselves. One-fourth (24.4%) *usually* or *always* asked a sister; only 14.6% asked a friend. Fathers were seldom a part of the decisions on what to buy.

Table 27

*Girls' Perception of Influentials' Frequency of Help in Deciding What Clothes To Wear*

	Mother (%)	Father (%)	Sister (%)	Friend(s) (%)	By Myself (%)
Always	14.6	2.4	4.9	4.9	14.6
Usually	41.5	0	19.5	31.7	46.3
Half of the- time	31.7	14.6	17.1	31.7	29.3
Almost- Never	12.2	19.5	9.8	9.8	4.9
Never	0	61	43.9	19.5	2.4
Missing/Not applicable		2.4	4.9	2.4	2.4
Total	100	100	100	100	100

Table 27 shows that 60.9% of the respondents answered that they *always* or *usually* consulted only themselves when deciding what clothes to wear. Slightly fewer (56.1%) consulted their mother, and still fewer *usually* or *always* consulted a friend (36.6%) or a sibling (24.4%). Fathers were seldom consulted when choosing what clothes to wear.

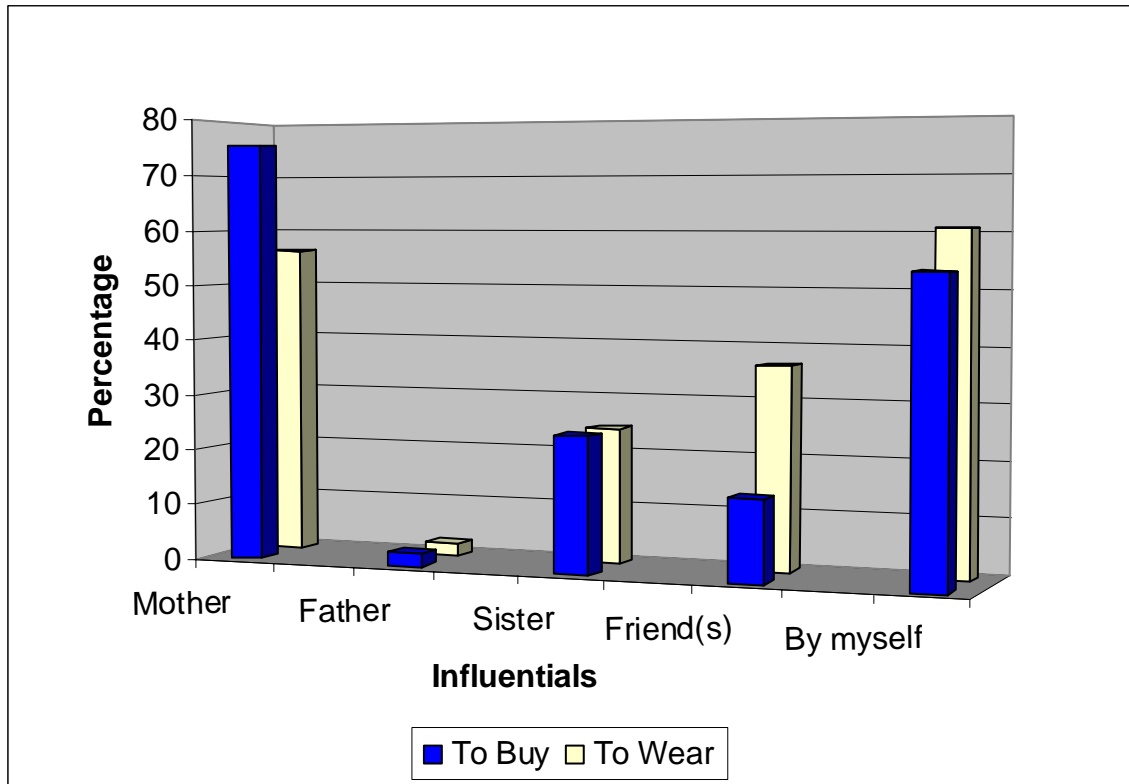


Figure 5. Frequency of influentials on what to buy and what to wear

Figure 5 shows the combined results of the responses in Tables 27 and 28 for Always and Usually. Mothers' influences on their daughters' clothing selection were higher in terms of what clothes to buy (75.6%) than what to wear (56.1%). Girls listened to themselves more for what to wear (60.9%) than what to buy (53.7%). Friends were much more influential for what to wear (60.9%) than buy. Sisters shared equal influence in terms of what to buy (24.4%) and what to wear (24.4%).

Table 28

*Helping Normal- and plus-size Daughters Decide What Clothes To Buy*

Influential for what clothes to buy	Group	Mean	Std. Deviation	Sig
Mother	Normal	3.86	0.793	0.982
	Plus-size	3.85	1.182	
Father	Normal	1.62	0.669	0.466
	Plus-size	1.80	0.894	
Sister(s)	Normal	2.31	1.401	0.807
	Plus-size	2.19	1.471	
Friend(s)	Normal	2.62	1.071	0.228
	Plus-size	2.21	1.032	
By myself	Normal	3.71	0.644	0.015*
	Plus-size	3.00	1.076	

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \* $p \leq 0.05$*

An independent sample *t*-test was computed to explore differences among influentials (mother, father, sister, friend, self) in helping normal- and plus-size daughters decide what clothes to buy. A mean score was calculated from the response scale for each of the influentials (mother, father, sister, friend, self) for what clothes to buy and what clothes to wear. An independent sample *t* test (see Table 28) was statistically significant at  $p=0.01$ , showing a difference between normal- and plus-size girls with respect to deciding on their own what to buy. Based on the means, normal-size girls were more likely to decide themselves about what clothing to buy. As shown in Table 29, there were no statistically significant differences between normal- and plus-size daughters in this study in terms of who they said helped them decide what clothes to wear.



Table 29

*Helping Normal- and plus-size Daughters Decide What Clothes To Wear*

Influential for what clothes to wear	Group	Mean	Std. Deviation	Sig
Mother	Normal	3.43	0.870	0.255
	Plus-size	3.75	0.910	
Father	Normal	1.48	0.750	0.382
	Plus-size	1.74	1.098	
Sister(s)	Normal	2.19	1.327	0.659
	Plus-size	2.39	1.461	
Friend(s)	Normal	2.76	1.091	0.376
	Plus-size	3.11	1.329	
By myself	Normal	3.76	0.944	0.522
	Plus-size	3.58	0.838	

Table 30

*Helping Younger and Older Daughters Decide What Clothes To Buy*

Influential for what clothes to buy	Group	Mean	Std. Deviation	Sig
Mother	Younger	3.95	0.848	0.57
	Older	3.77	1.110	
Father	Younger	1.84	0.765	0.31
	Older	1.59	0.796	
Sister(s)	Younger	2.16	1.344	0.66
	Older	2.38	1.557	
Friend(s)	Younger	2.16	1.167	0.13
	Older	2.67	0.913	
By myself	Younger	3.37	0.831	0.98
	Older	3.36	1.049	

Table 30 shows that there was no statistically significant difference between younger and older girls in this study in terms of who they said helped them decide what clothes to wear. However, Table 31 shows results of an independent sample *t* test that was statistically significant ( $p= 0.03$ ) for mothers having more influence in helping the younger daughters decide what clothes to wear than the older girls. An independent sample *t* test was also statistically significant ( $p= 0.001$ ) for girls who chose themselves as being influential in deciding what clothes to wear. Older girls relied on themselves more than younger girls did.

Table 31

*Influentials Among Younger and Older Daughters on What Clothes To Wear*

Influential for what clothes to wear	Group	Mean	Std. Deviation	Sig
Mother	Younger	3.89	0.658	0.03*
	Older	3.32	0.995	
Father	Younger	1.89	1.150	0.06
	Older	1.33	0.577	
Sister(s) or brother(s)	Younger	2.32	1.493	0.88
	Older	2.25	1.293	
Friend(s)	Younger	2.58	1.346	0.08
	Older	3.24	0.995	
By myself	Younger	3.21	0.918	0.001***
	Older	4.10	0.625	

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$*

*Research Question 9: Is there a difference between mothers' and daughters' rankings of clothing decision factors for what to wear?*

To analyze this research question, paired sample *t* tests were computed to determine if there was a difference between how daughters ranked decision factors for what to wear and how their mothers ranked them. The factors analyzed were *comfort, fit, newest fashion, favorite color, brand name, best looking, and what friends will be wearing*. Each decision factor was scored from 1 to 5. Mothers and daughters each answered how often each factor was important.

Table 32

*Clothing Decision Factors for What Clothes To Wear*

Clothing decision factors	Daughters	Mothers	Std. Deviation	<i>P value</i>
	Mean	Mean		
Best looking	4.05	3.88	0.973/1.187	0.41
Fit	4.34	3.59	0.762/1.183	0.003**
Comfortable	4.05	3.56	0.947/1.141	0.03**
Favorite color	3.15	3.34	1.062/0.855	0.37
Newest fashion	2.80	3.37	1.308/1.280	0.007**
Brand name	2.59	2.49	1.245/1.502	0.6
Friends will be wearing	2.07	3.24	0.959/1.179	0.000***

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$*

Table 32 shows that in the paired sample *t* test, there were four clothing factors that were statistically significant. There was a significant difference ( $p= 0.003$ ) between mothers and daughters for the decision factor: *clothes that fit well*, daughters rated it as more important than mothers did (4.34/ 3.59). *Clothes that are comfortable* was also significantly different ( $p= 0.03$ ). Responses for *clothes that are comfortable* showed that the daughters viewed it as having more importance (4.05) than the mothers thought they did (3.56). *Clothes that are the newest fashion* was significantly different ( $p= 0.007$ ). Responses for *clothes that are the newest fashion* showed that the mothers viewed it as having more importance (3.37) than the daughters thought it had (2.80). There was a statistically significant difference ( $p= 0.000$ ) between daughters and mothers for the

decision factor, *clothes like those that friends will be wearing* (2.07/ 3.24). Choosing *clothes like those that friends would be wearing* was less important to the daughters than the mothers thought.

Table 33

*Clothing Decision Factors With Normal-size Daughters and Their Mothers*

Clothing decision factors	Normal-sized daughters Mean	Their mothers Mean	Std. Deviation	<i>P value</i>
Best looking	4.00	4.38	1.095/ 0.865	0.16
Fit	4.33	4.10	0.730/1.091	0.42
Comfortable	3.81	4.00	0.873/1.000	0.47
Favorite color	3.14	3.29	1.014/0.956	0.63
Newest fashion	2.81	3.43	1.289/1.207	0.02*
Brand name	2.57	2.38	1.248/1.431	0.42
Friends will be wearing	2.00	3.14	0.707/1.195	0.003***

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$*

To explore normal-size daughters' and their mothers' clothing decision factors for choosing what to wear, paired sample *t* tests were performed. Table 33 shows that in the paired sample *t tests* there were two clothing factors that were statistically significant. There was a significant difference ( $p= 0.003$ ) between mothers' and daughters' responses for *Clothes like those that friends would be wearing*; mothers rated it as being more important than their daughters did (3.14/2.00). For the clothing decision factor, choosing

to wear the newest fashion, there was a statistically significant ( $p= 0.02$ ) difference between the normal-size daughters' mean (2.81) and their mothers' mean (3.43).

Choosing the newest fashion was only important sometimes for normal-size daughters while their mothers believed that it was important more than half of the time.

Table 34

*Clothing Decision Factors With Plus-size Daughters and Their Mothers*

Clothing decision factors	Plus-size daughters Mean	Their Mothers Mean	Std. Deviation	<i>P value</i>
Best looking	4.10	3.35	0.852/1.268	0.01**
Fit	4.35	3.05	0.813/1.050	0.001***
Comfortable	4.30	3.10	0.979/1.119	0.00***
Favorite color	3.15	3.40	1.137/0.754	0.44
Newest fashion	2.89	3.47	1.329/1.172	0.08
Brand name	2.68	2.74	1.250/1.522	0.89
Friends will be wearing	2.15	3.35	1.182/1.182	0.00***

*Note. Significant P values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \* $p \leq 0.05$*

To explore plus-size daughters' and their mothers' clothing decision factors for what to wear, paired sample *t tests* were performed. Table 34 shows that in the paired sample *t tests* there were four clothing factors that were statistically significant. There was a significant difference ( $p= 0.001$ ) between plus-size daughters' and their mothers'

responses for clothing that fit well; daughters rated it as being more important than their mothers did (4.35/3.05). Plus-size daughters also usually thought about choosing clothing that fit well when deciding what to wear, while their mothers thought that they only thought about clothing that fit well half of the time.

For the clothing decision factor: *comfortable*, there was a statistically significant difference ( $p= 0.00$ ) between plus-size daughters' and their mothers' responses; daughters rated it more important than their mothers did (4.30/ 3.10). Comfort was usually important in plus-size daughters' clothing decisions, while their mothers reported that they thought about choosing comfortable clothing only half of the time. For the decision factor: *clothes that look best*, there was a significant difference ( $p= 0.01$ ) between plus-size daughters and their mothers; daughters rated it as being more important than their mothers did. Choosing clothes that look the best on them was clearly more important to plus-size daughters than their mothers appreciated. For the clothing decision factor: *friends will be wearing*, there was a statistically significant difference ( $p= 0.00$ ) between plus-size daughters and their mothers; daughters rated it as being less important than their mothers did (2.15/3.35).

Table 35

*Clothing Decision Factors With Younger Daughters and Their Mothers*

Clothing decision factors	Younger daughters Mean	Their mothers Mean	Std. Deviation	<i>P value</i>
Best looking	3.68	3.63	1.157/1.257	0.89
Fit	4.32	3.16	0.885/1.259	0.006**
Comfortable	4.11	3.53	0.994/1.264	0.07
Favorite color	3.26	3.11	0.933/0.809	0.56
Newest fashion	2.74	2.95	1.408/1.026	0.36
Brand name	2.21	2.05	1.134/1.508	0.60
Friends will be wearing	2.11	3.05	0.994/1.129	0.003***

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$*

To explore younger daughters' and their mothers' decision factors for choosing what to wear, paired sample *t* tests were performed. Table 35 shows that in the paired sample *t* tests there were two clothing factors that were statistically significant. There was a significant difference ( $p= 0.006$ ) between younger daughters' and their mothers' responses for clothes that fit well; daughters rated it as being more important than mothers did (4.32 versus 3.16). Younger daughters thought about choosing clothes that fit well more than mothers thought that they did. There was a statistically significant difference ( $p=0.003$ ) between younger daughters' and their mothers' responses for



clothes that friends would be wearing; daughters rated it as being less important than their mothers did (2.11 versus 3.05).

Table 36

*Clothing Decision Factors With Older Daughters and their Mothers*

Clothing decision factors	Older daughters' Mean	Their mothers' Mean	Std. Deviation	<i>P value</i>
Look best	4.36	4.09	0.658/1.109	0.20
Fit	4.36	3.95	0.658/0.999	0.17
Comfortable	4.00	3.59	0.926/1.054	0.20
Favorite color	3.05	3.55	1.174/0.858	0.13
Brand name	2.91	2.86	1.269/1.424	0.88
Newest fashion	2.86	3.73	1.246/1.386	0.01**
Friends will be wearing	2.05	3.41	0.950/1.221	0.001***

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \*  $p \leq 0.05$*

To explore older daughters' and their mothers' decision factors for what to wear, paired sample *t* tests were performed. Table 36 shows that there were two clothing factors that were statistically significant. There was a significant difference ( $p=0.001$ ) between older daughters' and their mothers' responses for clothes that friends would be wearing; mothers rated it as being more important than their daughters did (3.41 versus 2.05). However, choosing what to wear based on what friends would be wearing was less important for older daughters than their mothers thought. The means for older

daughters (2.86) and their mothers (3.73) were also statistically significantly different ( $p=0.01$ ) in rating the importance of choosing clothes that are the newest fashion. Older daughters rated choosing the newest fashion as being less important than their mothers' believed it would be.

*Research Question 10: Is there a relationship between girls' dissatisfaction scores and clothing decision factors of what clothes to wear?*

To analyze this research question, Pearson's correlation was conducted to determine if there was a relationship between girls' dissatisfaction scores and clothing decision factors of what clothes to wear. The daughters' body dissatisfaction scores were determined by finding the difference between their identification of ideal size and perception of actual size using Stunkard et al.'s (1983) drawings. A positive score for body dissatisfaction meant that the identification of ideal size was bigger than the perception of actual size. The score zero meant that actual size and the ideal size identified were the same and there was thus no body dissatisfaction. A negative score for body dissatisfaction meant that the identification of ideal size was smaller than the perception of actual size and indicated a desire to be thinner. The clothing decision factors for what to wear were comfort, fit, newest fashion, favorite color, brand name, look best, and friends will be wearing. Each decision factor was scored from 1 (never) to 5 (always). Girls answered how often each factor was important. Table 37 shows the mean scores for girls' rating of the clothing decision factors. The girls rated clothes that fit well the highest, followed by clothes that look best and are comfortable.

Table 37

*Means of Clothing Decision Factors and Girls' Body Dissatisfaction Scores*

	Mean	Std. Deviation
Dissatisfaction (ideal-self)	-0.63	0.90846
Clothes that fit well	4.34	0.762
Clothes that look best	4.05	0.973
Clothes that are comfortable	4.05	0.947
Clothes that are favorite color	3.15	1.062
Clothes that are the newest fashion	2.80	1.308
Clothes with a popular brand name	2.59	1.245
Clothes like those that friends will be wearing	2.07	0.959

Table 38

*Pearson Correlation Between Body Dissatisfaction and Clothing Decision Factors*

	Dissatisfaction	Sig
Look best	-0.07	0.63
Comfortable	-0.34*	0.029
Newest fashion	0.06	0.7

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \* $p \leq 0.05$*

As shown in Table 38, there was a significant negative correlation ( $p= 0.029$ ) between girls' body dissatisfaction scores and choosing clothes that are comfortable. The square of the Pearson correlation can be used to interpret the strength of the relationship, leading to the conclusion that 12% ( $-0.34^2$ ) of the daughters' body dissatisfaction can be accounted for by the linear relationship with comfort as a clothing decision factor.

Table 39

*Mean Responses for Clothing Decision Factors for What To Wear By Girls' Groups*

Clothing factors	Normal	Plus	Younger	Older
Look best	4.22	4.21	4.00	4.36
Fit well	4.39	4.32	4.33	4.36
Favorite color	3.17	3.05	3.20	3.05
Comfortable	3.72	4.32	4.07	4.00
Newest fashion	2.78	2.79	2.67	2.86
Brand name	2.61	2.63	2.20	2.91
Friends will be wearing	2.00	2.16	2.13	2.05

To explore normal- and plus-size girls' and younger and older girls' relationships between body dissatisfaction scores and clothing decision factors, MANOVA (Multivariate data analysis) was performed. The independent variables as predictors were the groups: normal- and plus-size girls, and younger and older girls. Table 39 shows the means for each group. The dependent variables were girls' dissatisfaction scores and clothing decision factor scores. MANOVA showed no violation of the equal variance assumption. There were no statistically significant relationships between normal- and plus-size daughters' body dissatisfaction scores and their clothing decision factors for what clothes to wear, and there were also none for younger and older daughters.

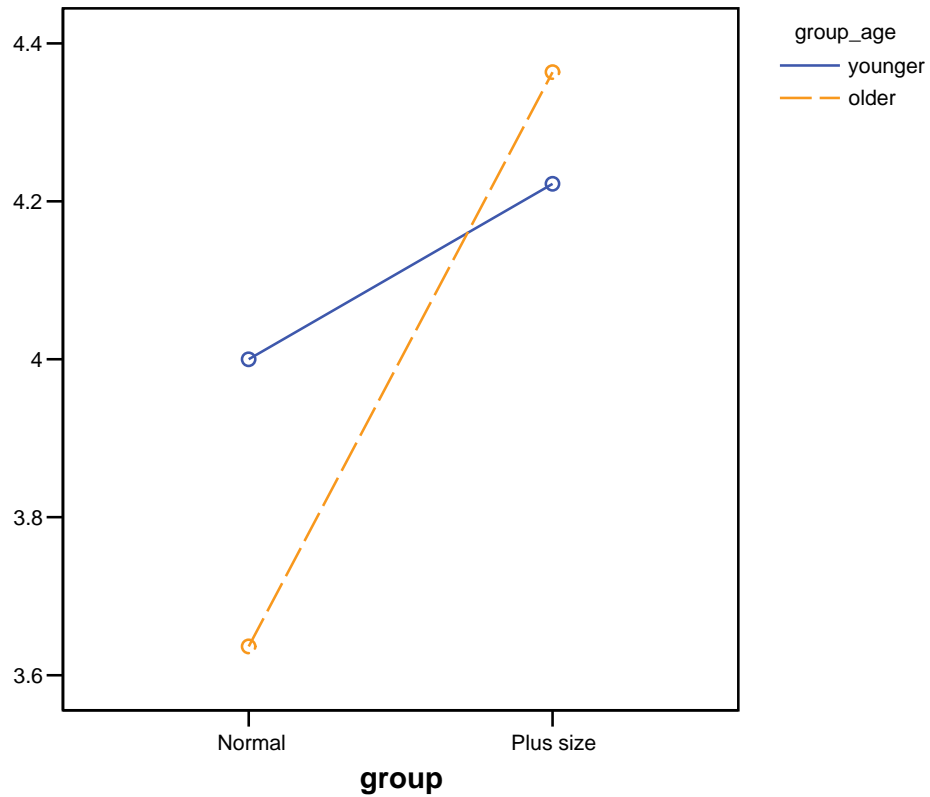


Figure 6. Comfort decision factor for normal, plus-size, younger, and older girls

Although there were no significant relationships found for the four groups, Figure 6 depicts their mean scores for the one decision factor, comfort, that was significantly related to dissatisfaction for the whole group. The difference between plus and normal sizes is particularly visible for the older girls.

*Research Question 11: Do mothers correctly perceive their daughters' weight concerns?*

To analyze this research question, non-parametric binomial tests were computed to determine whether mothers correctly perceived their daughters' weight concerns. The

scales of the questionnaires were categorical responses, namely either yes or no. In Table 40, the results show the percentages of mothers and daughters who were in agreement (either yes/yes or no/no).

Table 40

*Summary of Mothers' and Daughters' Agreement on Weight Concerns*

Weight concerns	Mothers and daughters Yes (%)	Mothers and daughters No (%)	Agreement Total (%)	Sig. (Phi)
Pair 1. Mother: Has your daughter ever wanted be thinner? Daughter: Have you ever wanted be thinner?	58.5	14.6	73.1	0.027*
Pair 2. Mother: Have you ever wanted your daughter to be thinner? Daughter: Have you ever wanted be thinner?	43.9	19.5	63.4	0.03*
Pair 3. Mother: Has your daughter ever wanted to be heavier? Daughter: Have you ever wanted be heavier ?	2.9	97.1	100	0.000***
Pair 4. Mother: Have you ever wanted your daughter to be heavier? Daughter: Have you ever wanted be heavier?	3.0	90.9	93.9	0.001***
Pair 5. Mother: Has your daughter ever tried to lose weight? Daughter: Have you ever tried to lose weight?	29.3	24.4	53.7	0.22
Pair 6. Mother: Have you ever encouraged your daughter to lose weight? Daughter: Have you ever tried to lose weight?	26.8	26.8	53.6	0.12
Pair 7. Mother: Has your daughter ever tried to gain weight? Daughter: Have you ever tried to gain weight?	3.0	93.9	96.9	0.000***
Pair 8. Mother: Have you ever encouraged your daughter to gain weight? Daughter: Have you ever tried to gain weight?	3.0	93.9	96.9	0.000***

*Note. Significant P values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \* $p \leq 0.05$*

Table 40 provides a summary of the mothers' and daughters' answers that are shown in Tables 41, 44, 46, 49, 51, 54, 56, and 59, which show the detailed Responses to each pair of questions. The significant (Phi) values indicate significant levels of agreement between mothers and daughters. There was significant agreement between mothers and daughters for six of the eight pairs of questions. Note that the mothers answered eight questions, but the daughters answered only four questions, each of which was paired with two related questions for the mothers.

*Desire to be thinner*

Table 41

*Responses to Question Pair 1*

		Have you ever wanted to be thinner?		
		<i>Yes</i>	<i>No</i>	<i>Total</i>
Has your daughter ever wanted to be thinner?	<i>Yes</i>	24 (58.5%)	4 (9.8%)	28 (68.3%)
	<i>No</i>	7 (17.1%)	6 (14.6%)	13 (31.7%)
<i>Total</i>		31 (75.6%)	10 (24.4%)	41 (100.0%)

Phi = 0.027

Table 41 shows that there was a statistically significant relationship ( $p= 0.027$ ) between mothers and daughters on the subject that daughters wanted to be thinner and their mothers recognizing that desire (Question pair #1). Table 41 shows all the responses.



Table 42

*Daughters' Responses for have you ever wanted be thinner Comparing Normal- and Plus-Size*

Group	Yes	No	Total
Normal	14 (66.7%)	7 (33.3%)	21(100%)
Plus	17 (85%)	3 (15%)	20 (100%)

Tables 42 and 43 show responses for the groups, normal- and plus-size girls, and their mothers. Seventeen of the plus-size daughters (85%) wanted to be thinner and eighteen of their mothers (90%) perceived that the daughters wanted to be thinner.

Table 43

*Mothers' Responses for has your daughter ever wanted to be thinner Comparing Normal- and Plus-Size Daughters*

Group	Yes	No	Total
Normal	10 (47.6%)	11 (52.4%)	21(100%)
Plus	18 (90%)	2 (10%)	20 (100%)

Fourteen of the normal-size daughters (66.7%) but only ten of their mothers (47.6%) perceived that the daughters wanted to be thinner.

Table 44

*Responses to Question Pair 2*

		Have you ever wanted to be thinner?		
		<i>Yes</i>	<i>No</i>	<i>Total</i>
Have you ever wanted your daughter to be thinner?	<i>Yes</i>	18 (43.9%)	2 (4.9%)	20 (48.8%)
	<i>No</i>	13 (31.7%)	8 (19.5%)	21 (51.2%)
<i>Total</i>		31 (75.6%)	10 (24.4%)	41 (100.0%)

Phi = 0.03

Mothers were asked if they wanted their daughters to be thinner and this was compared to their daughters' desire to be thinner (Question Pairing #2). Table 44 shows that there was a statistically significant relationship ( $p= 0.03$ ) between mothers and daughters showing agreement (yes agreement 43.9%, no agreement 19.5%).

Table 45

*Mothers' Responses for have you ever wanted your daughter to be thinner Comparing Normal- and Plus-size Daughters*

Group	Yes	No	Total
Normal	4 (19%)	17 (81%)	21(100%)
Plus-size	16 (80%)	4 (20%)	20 (100%)

Table 45 shows that 16 of the mothers of plus-size girls (80%) answered that they wanted their daughter to be thinner. This compares with seventeen of the plus-size daughters (85%) (see Table 42) who wanted to be thinner. Only four of the mothers of normal-size girls (19%) wanted their daughter to be thinner, but 14 of the normal-size daughters (66.7%) (see Table 42) wanted to be thinner.

*Desire to be heavier*

Table 46

*Responses to Question Pair 3*

		Have you ever wanted to be heavier?		
		<i>Yes</i>	<i>No</i>	<i>Total</i>
Has your daughter ever wanted to be heavier?	<i>Yes</i>	1 (2.9%)	0 (0%)	1 (2.9%)
	<i>No</i>	0 (0%)	33 (97.1%)	33 (97.1%)
<i>Total</i>		1 (2.9%)	33 (97.1%)	41 (100.0%)

Phi = 0.00

To explore whether mothers correctly perceived their daughters' weight concerns about wanting to be heavier, non-parametric binominal tests were performed. (see Question Pairing 3 in Table 46). There was a statistically significant relationship ( $p=0.00$ ) showing agreement between mothers and daughters. Most agreed on the girls not wanting to be heavier (97.1%).

Table 47

*Daughters' Responses for have you ever wanted be heavier Comparing Normal- and Plus-size*

Group	Yes	No	Total
Normal	2 (9.5%)	19 (90.5%)	21(100%)
Plus-size	0 (0%)	20 (100%)	20 (100%)

Table 48

*Mothers of Normal- and Plus-Size Daughters Responses for has your daughter ever wanted to be heavier*

Group	Yes	No	Total
Normal	1 (5.6%)	17 (94.4%)	18 (100%)
Plus-size	0 (0%)	16 (100%)	16 (100%)

Tables 47 and 48 report the responses for the normal- and plus-size groups and their mothers. Table 48 shows that 17 (94.4%) of the mothers of normal-size girls perceived that their daughter did not want be heavier, and 19 (90.5%) (Table 47) of normal-size daughters said that they didn't want to be heavier. Sixteen (100%) of the mothers of plus-size daughters perceived that their daughters did not want to be heavier, while all 20 (100%) of the plus-size daughters said that they didn't want to be heavier.

Table 49

*Responses to Question Pair 4*

		Have you ever wanted to be heavier?		
		<i>Yes</i>	<i>No</i>	<i>Total</i>
Have you ever wanted your daughter to be heavier?	<i>Yes</i>	1 (3%)	2 (6.1%)	3 (9.1%)
	<i>No</i>	0 (0%)	30 (90.9%)	30 (90.9%)
<i>Total</i>		1 (3%)	32 (97%)	33 (100.0%)

Phi = 0.001

A question to mothers about wanting their daughters to be heavier was compared with whether or not the girls wanted to be heavier (Question Pair #4 and Table 49). There was a statistically significant relationship ( $p= 0.001$ ) between mothers' and daughters' answers with (90.9%) of the whole sample agreeing on no. Table 50 shows the mothers' responses concerning their desire for their normal- and plus-size daughters to be heavier. Eight mothers did not respond to this question. However, all 15 (83.3%) responding mothers of plus-size girls said that they did not want their daughter to be heavier, and Table 47 shows that all 20 (100%) of the plus-size daughters said that they did not want to be heavier. Fifteen (83.3%) mothers of normal-size girls said that they did not want their daughters to be heavier, while 19 (90.5%) normal-size daughters said that they did not want to be heavier (see Table 47).

Table 50

*Mothers of Normal- and Plus-Size Daughters Responses for have you ever wanted your daughter to be heavier*

Group	Yes	No	Total
Normal	3 (16.7%)	15 (83.3%)	18 (100%)
Plus-size	0 (0%)	15 (100%)	15 (100%)

*Losing weight*

Table 51

*Responses to Question Pair 5*

		Have you ever tried to lose weight?		<i>Total</i>
		<i>Yes</i>	<i>No</i>	
Has your daughter ever tried to lose weight?	<i>Yes</i>	12 (29.3%)	3 (7.3%)	15 (36.6%)
	<i>No</i>	16 (39%)	10 (24.2%)	26 (63.4%)
<i>Total</i>		28 (68.3%)	13 (31.7%)	41 (100.0%)

Phi = 0.22

Girls were asked if they had ever tried to lose weight and mothers were asked if they thought their daughters had ever tried to lose weight (Question Pair #5). Table 51 shows that 53.7% (yes agreement 29.3%, no agreement 24.4%) of daughters' and mothers' responses matched, yielding a phi value of 0.22 for the whole sample.

Therefore, there was no statistically significant relationship for the mothers' perception of their daughters trying to lose weight.

Table 52

*Daughters' Responses for have you ever tried to lose weight Comparing Normal- and*

*Plus-Size*

Group	Yes	No	Total
Normal	11 (52.4%)	10 (47.6%)	21 (100%)
Plus-size	17 (85%)	3 (15%)	20 (100%)

Table 53

*Mothers of Normal- and Plus-size Daughters Responses for has your daughter ever tried to lose weight*

Group	Yes	No	Total
Normal	3 (14.3%)	18 (85.7%)	21 (100%)
Plus-size	12 (60%)	8 (40%)	20 (100%)

Tables 52 and 53 show the mothers' and daughters' responses concerning trying to lose weight. In Table 53, 12 (60%) of the mothers of plus-size daughters said that they thought their daughter had tried to lose weight compared to the 17 (85%) (see Table 52) plus-size daughters who said they had tried to lose weight. Only three (14.3%) mothers of normal-size girls thought that their daughters had tried to lose weight, but 11 (52.4%) of the girls said that they had tried.

Table 54

*Responses to Question Pair 6*

		Have you ever tried to lose weight?		
		Yes	No	Total
Have you ever encouraged your daughter to lose weight?	Yes	11 (26.8%)	2 (4.9%)	13 (31.7%)
	No	17 (41.5%)	11 (26.8%)	28 (68.3%)
<i>Total</i>		28 (68.3%)	13 (31.7%)	41 (100.0%)

Phi = 0.12

Mothers were asked if they had ever encouraged their daughters to lose weight, and their responses were compared to their daughters' having tried to lose weight (question pair #6). The Phi value of 0.12 shown in Tables 40 and 54 reveals that there

was no significant agreement. About one- fourth of the pairs both said yes, and about one- fourth both said no.

Table 55

*Mothers of Normal- and Plus-Size Daughters Responses for have you ever encouraged your daughter to lose weight*

Group	Yes	No	Total
Normal	1 (4.8%)	20 (95.2%)	21 (100%)
Plus-size	12 (60%)	8 (40%)	20 (100%)

As shown in Table 55, 12 (60%) mothers of plus-size girls said that they had encouraged their daughter to lose weight, while 17 (85%) of plus-size daughters reported that they had tried to lose weight (see Table 52). Twenty (95.2%) mothers of normal-size girls said that they had never encouraged their daughter to lose weight, but 11 normal-size daughters (52.4%) reported that they had tried to lose weight (see Table 52).

*Gaining weight*

Table 56

*Responses to Question Pair 7*

		Have you ever tried to gain weight?		
		<i>Yes</i>	<i>No</i>	<i>Total</i>
Has your daughter ever tried to gain weight?	<i>Yes</i>	1 (3%)	1 (3%)	2 (6.1%)
	<i>No</i>	0 (0%)	31 (93.9%)	31 (93.9%)
<i>Total</i>		1 (3%)	32 (97%)	33 (100.0%)

Phi = 0.00



Girls were asked if they had tried to gain weight, and mothers were asked if they thought that their daughters had done so (Question Pair #7). The results, shown in Tables 40 and 56, revealed high agreement (no 93.9%) for a statistically significant level of Phi 0.00. Therefore, there was a significant relationship between mothers' and daughters' weight concerns about gaining weight for the whole sample.

Table 57

*Daughters' Responses for have you ever tried to gain weight Comparing Normal- and Plus-Size Groups*

Group	Yes	No	Total
Normal	2 (9.5%)	19 (90.5%)	21 (100%)
Plus-size	0 (0%)	20 (100%)	20 (100%)

Table 58

*Mothers of Normal- and Plus-Size Daughters Response for has your daughter ever tried to gain weight*

Group	Yes	No	Total
Normal	2 (11.1%)	16 (88.9%)	18 (100%)
Plus-size	0 (0%)	15 (100%)	15 (100%)

Tables 57 and 58 show normal- and plus-size girls' and their mothers' responses about trying to gain weight. As Table 58 shows, 16 (88.9%) mothers of normal-size girls said that their daughters had never tried to gain weight; 19 (90.5%) (see Table 57) normal-size daughters reported that they had never tried to gain weight. Fifteen (100%) mothers of plus-size girls said that their daughters had never tried to gain weight, but all 20 (100%) plus-size daughters reported that they had never tried to gain weight.

Table 59

*Responses to Question Pair 8*

		Have you ever tried to gain weight?		
		<i>Yes</i>	<i>No</i>	<i>Total</i>
Have you ever encouraged your daughter to gain weight?	<i>Yes</i>	1 (3%)	1 (3%)	2 (6.1%)
	<i>No</i>	0 (0%)	31 (93.9%)	31 (93.9%)
<i>Total</i>		1 (3%)	32 (97%)	33 (100.0%)

Phi = 0.00

Mothers were asked if they had ever encouraged their daughters to gain weight (Question Pair #8). Tables 40 and 59 show that 93.9% of the pairs answered no, giving a Phi 0.00 level for the whole sample. Therefore, there was a statistically significant relationship between not encouraging their daughters to gain weight and the girls not trying to gain weight.

Table 60

*Mothers of Normal- and Plus-Size Daughters Response for have you ever encouraged your daughter to gain weight*

Group	Yes	No	Total
Normal	2 (11.1%)	16 (88.9%)	18 (100%)
Plus-size	0 (0%)	15 (100%)	15 (100%)

Table 60 shows that 16 (88.9%) mothers of normal-size daughters said that they had not encouraged their daughters to gain weight; while 19 (90.5%) normal-size girls reported that they had never tried to gain weight (see Table 58). All 15 (100%) mothers of plus-size daughters who responded said that they had not encouraged their daughters to gain

weight (Table 60); all 20 (100%) plus-size daughters reported that they never tried to gain weight (see Table 57).

*Research Question 12: Is there a relationship between the daughters' perception of their own body image and their mothers' involvement?*

To analyze this research question, Pearson's correlation was performed to determine if there was a relationship between daughters' perception of their own body image and mothers' involvement in their daughters' body image. The mothers' involvement in their daughters' body image scores came from two items of the parental investment scale (PARINV; Levin et al., 1994). The scales range from 1= not at all concerned to 5= very concerned in the daughters' questionnaire. The possible minimum score was 2 and maximum score was 10. The daughters' perception of their own body image scores were summed from the 4-point Satisfaction with Body Image scales (Blyth et al., 1985) about happiness with height, weight, development, and attractiveness. In these scales, 1 signified not at all happy and 4 meant very happy. The daughters' body image scores were totaled; the possible minimum score was 4 and maximum score was 16.

Table 61

*Means of Daughters' Perception of Body Image and Mothers' Involvement*

	Mean	Std. Deviation
Daughters' perception of body image	10.85	2.116
Mothers' involvement scales	4.8780	2.357

As shown in Table 61, the daughters' mean perception of body image was 10.85, and mothers' involvement was 4.9. There was no statistically significant relationship

between the daughters' perception of their own body image and their mothers' involvement. To explore normal- and plus-size daughters' and younger and older daughters' perceptions of body image and mothers' involvement, MANOVA (Multivariate data analysis) was performed. The independent variables as predictors were the group (normal- and plus-size daughters and younger and older daughters), while the dependent variables were daughters' perception of body image and mothers' involvement. MANOVA showed no violation of the equal variance assumption. There was no statistically significant relationship between these groups' perception of body image and mothers' involvement.

*Research Question 13: Is there a relationship between daughters' perceptions of their friends' weight concerns and their own body image?*

To analyze this research question, Pearson's correlation was applied to determine if there was a relationship between perceptions of friends' weight concerns and daughters' perception of body image. The perception of friends' weight concerns scores came from the PEERDIET scales, with scores on the questions ranging from 1 (none) to 5 (all) in the daughters' questionnaire. There were four questions, three of which asked how many of their friends wanted to be thinner, how many friends were dieting, and how often they and friends talked about dieting. The fourth asked how many friends wanted to be heavier; the responses for this final question were reverse coded to relate to the content of the other questions. The scores for the four questions were totaled to determine each girl's friend's weight concerns. The possible minimum score was 4, and the maximum score was 20. The daughters' perception of body image score was calculated from the responses regarding their own body image in the scale of Satisfaction

with Body Image scales (Blyth et al., 1985) about happiness with height, weight, development, and attractiveness. Once again the minimum score was 4 and the maximum score was 16.

Table 62

*Means of Daughters' Perceptions of their Own Body Image and their Friends' Weight Concerns*

	Mean	Std. Deviation
Daughters' perception of body image	10.85	2.116
Friends' perception of weight concerns	11.05	2.376

As shown in Table 62, the mean of daughters' perception of their own body image was 10.85 and their perception of their friends' weight concerns was 11.05. As shown in Table 63, there was a significant negative correlation ( $p= 0.05$ ) between the girls' perception of body image scores and their perception of their friends' weight concerns (PEERDIET) for the whole sample. The square of the Pearson correlation can be used to interpret the strength of the relationship, leading to the conclusion that 9% ( $-0.302^2$ ) of the daughters' perception of body image can be accounted for by the linear relationship with their perception of their friends' weight concerns.

Table 63

*Pearson Correlation Between Daughters' Perception of Body Image and PEERDIET*

Daughters' perception of body image	
PEERDIET	-0.302
Sig.	0.05*

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \* $p \leq 0.05$*

To explore normal- and plus-size girls' and younger and older girls' relationships between their perceptions of their friends' weight concerns and their perception of their own body image, MANOVA was performed. The independent variables as predictors were the groups: normal- and plus-size daughters and younger and older daughters. The dependent variables were the perceptions of friends' weight concerns score and the daughters' perception of their own body image score. There was no violation of the equal variance assumption. There was no statistically significant relationship between normal- and plus-size girls' perception of body image score and the score for their perception of their friends' weight concerns.

Table 64

*Normal- and Plus-Size and Younger and Older Daughters' Perceptions of their Own Body Image and their Friends' Weight Concerns*

	Group	Group (age)	Mean	Std. Deviation
Girls' perceptions of their own body image	Normal	Younger	11.00	1.944
		Older	11.36	2.063
		Total	11.19	1.965
	Plus-size	Younger	12.22	1.563
		Older	9.09	1.700
		Total	10.50	2.259
	Total	Younger	11.58	1.835
		Older	10.23	2.181
		Total	10.85	2.116
Friends' weight concerns (PEERDIET)	Normal	Younger	10.20	3.011
		Older	11.18	1.778
		Total	10.71	2.431
	Plus-size	Younger	10.33	2.291
		Older	12.27	2.053
		Total	11.40	2.326
	Total	Younger	10.26	2.621
		Older	11.72	1.956
		Total	11.04	2.376

Table 64 shows that the plus-size younger girls' mean body image score was 12.22; the normal-size older girls' was 11.36; the normal-size younger girls' was 11.00; the plus-size older girls' was 9.09. The plus-size younger girls were more satisfied with their own bodies regarding height, weight, development, and attractiveness than the other groups. The highest mean for perception of friends' weight concerns was for plus-size older girls (12.27), followed by normal-size older girls (11.18), plus-size younger girls

(10.33), and normal-size younger girls (10.20). Older girls perceived that their friends were more concerned with weight (11.72) than did younger girls (10.26).

Table 65

*MANOVA for Younger and Older Girls' Perceptions of their Own Body Image and their Friends' Weight Concerns*

	Sig	Partial Eta Squared	Observed Power
Wilks' Lambda	0.025*	0.185	0.688

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \* $p \leq 0.05$*

Table 66

*Tests of Between Subjects of Younger and Older Girls' Perceptions of their Own Body Image and their Friends' Weight Concerns*

	F	Sig.	Partial Eta Squared
Girls' perception of body image	5.770	0.02*	0.135
Friends' perception of weight concerns	4.070	0.05*	0.099

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \* $p \leq 0.05$*

Table 65 shows a statistically significant difference between younger and older girls in the relationships between their perceptions of their own body image and their perceptions of their friends' weight concerns at 0.025 (Wilk's Lambda) with a 20% effect size. In Table 66, a statistically significant ( $p= 0.02$ ) difference between younger and older girls' perceptions of body image is revealed. There was a statistically significant ( $p= 0.05$ ) difference between younger and older girls' perception of friends' weight concerns.



*Research Question 14: Is there a relationship between daughters' body dissatisfaction and clothing deprivation?*

To analyze this research question, Pearson's correlation was performed to determine if there was a relationship between daughters' body dissatisfaction and clothing deprivation. The clothing deprivation scores ranging from 1 (never) to 5 (always) were obtained from Part I (*Choosing Clothes*) in the daughters' questionnaire. Answers relate to how often the daughters feel that they do not have or can not get clothes that they would choose to wear for three types of occasions, namely school, doing things with friends, and dress-up clothes. The score for each girl was totaled to provide a single clothing deprivation score. The possible minimum score was 3, and maximum score was 15. The daughters' body dissatisfaction scores were determined by finding the difference between their identification of ideal size and perception of actual size using the Stunkard et al. (1983) figures. The sample size was adjusted to exclude those who indicated they wore school uniforms. Only one girl wore a school uniform.

Table 67

*Means for Daughters' Body Dissatisfaction and Clothing Deprivation*

	Mean	Std. Deviation
Daughters' body dissatisfaction	-0.63	.90846
Clothing deprivation	7.46	2.942

As shown in Table 67, the mean of daughters' body dissatisfaction was -0.63, and the mean of clothing deprivation was 7.46. Overall, there was no significant relationship between daughters' body dissatisfaction and clothing deprivation. To explore normal- and plus-size daughters' and younger and older daughters' relationships between

body dissatisfaction and clothing deprivation, MANOVA was performed. The independent variables as predictors were the groups normal- and plus-size and younger and older daughters. The dependent variables were the daughters' body dissatisfaction and clothing deprivation.

Table 68

*MANOVA for Normal- and Plus-Size Girls' Body Dissatisfaction and Clothing Deprivation*

	Sig	Partial Eta Squared	Observed Power
Wilks' Lambda	0.001***	0.3	0.685

*Note. Significant p values are noted by: \*\*\*  $p \leq 0.001$ , \*\*  $p \leq 0.01$ , \* $p \leq 0.05$*

Table 68 shows that there was a statistically significant difference between normal- and plus-size daughters' in the relationships between body dissatisfaction and clothing deprivation at 0.001 (Wilks' lambda) with 30% effect size. This may have been influenced by the statistically significant difference ( $p = 0.001$ ) between normal- and plus-size daughters' body dissatisfaction.

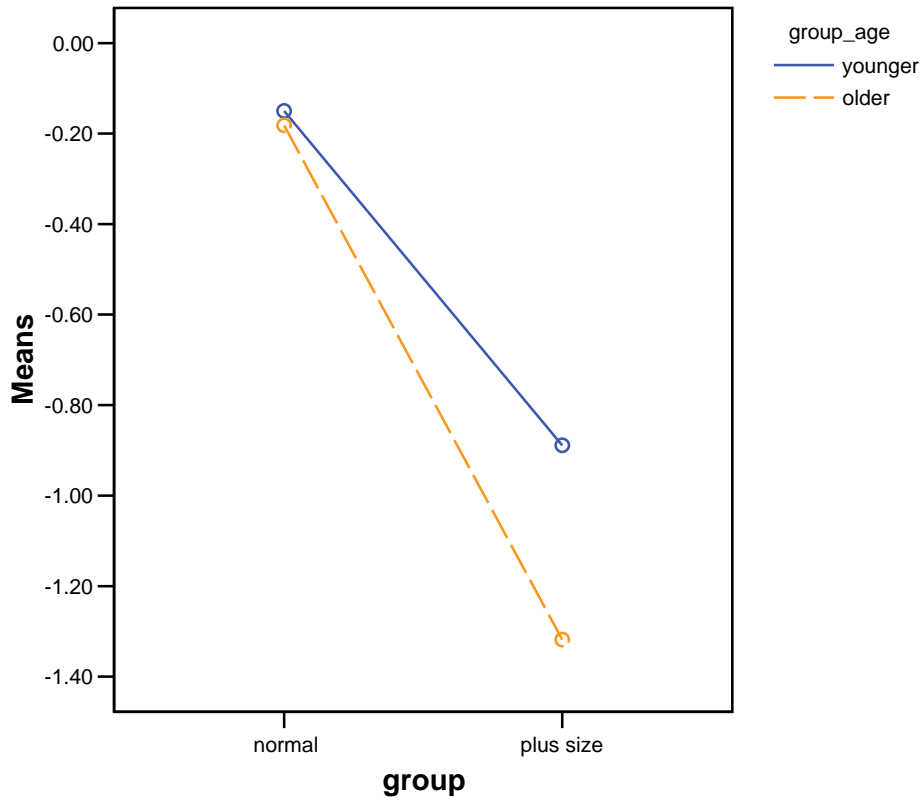


Figure 7. Girls' body dissatisfaction

There was no statistically significant finding between younger and older daughters' body dissatisfaction and clothing deprivation. As shown in Figure 7, normal-size younger and older girls' dissatisfaction with their own bodies were very similar, but plus-size older girls were more dissatisfied with their own bodies than plus-size younger girls.

Table 69

*Clothing Deprivation Results for All Girls*

	Clothes for school (%)	Clothes for friends (%)	Dress-up clothes (%)
Always or Usually	24.4	24.4	26.8
Half of the time	4.9	12.2	19.5
Sometimes or Never	70.8	63.5	53.7
Total	100	100	100

To understand more about tween girls and clothing deprivation feelings regarding clothes for school, clothes for friends, and dress-up clothes, descriptive statistics were used. Table 69 presents the results (percentages) of girls' Responses to deprivation questions in terms of clothes for school, clothes for friends, and dress-up clothes. Clothes for friends meant clothes worn while doing things with their friends, such as going to the movies or gathering at a friend's house. Dress-up clothes meant clothes for school dances or for going to an occasion like a wedding. Approximately one-fourth of the girls always or usually felt deprived for all categories. However, the sometimes or never responses show that they were least likely to feel deprived about clothes for school.

Table 70

*The Clothing Deprivation Results for Normal- and Plus-Size Girls*

Scales	Clothes for school		Clothes for friends		Dress-up clothes	
	(%)		(%)		(%)	
	normal	plus	normal	plus	normal	plus
Always or Usually	9.6	40	14.3	35	23.8	30
Half of the time	4.8	5	9.5	15	28.6	10
Sometimes or Never	85.7	55	76.1	50	47.6	60
Total	100	100	100	100	100	100

Table 70 breaks down the clothing deprivation results for the normal- and plus-size girls. The biggest difference between the two groups was in terms of school clothes. Forty percent of plus-size girls said that they always or usually did not have or could not get clothes that they would choose to wear to school compared to 9.6% of normal-size girls. Thirty-five percent of the plus-size girls said that they always or usually did not have or could not get clothes that they would choose to wear with friends, while 14.3% of normal-size girls responded in that way. However, these responses for dress-up clothes were closer (30% and 23.8%).

Table 71

*The Clothing Deprivation Results for Younger and Older Girls*

Scales	Clothes for school		Clothes for friends		Dress-up clothes	
	(%)		(%)		(%)	
	Younger	Older	Younger	Older	Younger	Older
Always or Usually	21	27.3	15.8	31.8	36.8	18.1
Half of the time	5.3	4.5	10.5	13.6	15.8	22.7
Sometimes or Never	73.7	68.2	73.7	54.6	47.3	59.1
Total	100	100	100	100	100	100

Table 71 compares the younger and older girls' responses for clothes for school, clothes for friends, and dress-up clothes. The always or usually responses for not having or not being able to get clothes for school were similar for younger and older girls (21% and 27.3%, respectively). However, this was not true for clothes to wear with friends and dress-up clothes. Approximately twice as many older girls (31.8% compared to 15.8% of the younger girls) always or usually felt deprived of clothes to wear with friends. The opposite was true for dress-up clothes; 36.8% of the younger girls answered always or usually for that category compared to 18.1% of the older girls; the sometimes or never percentages were closer. More younger girls than older girls said that they sometimes or never felt deprived concerning clothes for school or to wear with friends.

## CHAPTER V. SUMMARY, DISCUSSIONS, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

The purpose of this study was to explore the relationships of tween girls (aged 9 to 14 years) and their mothers regarding clothing behavior issues, body image, and body satisfaction. The purposive sample used in this study consisted of 41 mother-daughter pairs with daughters between the ages of 9 and 14 years. To understand the differences within the sample, the girls were divided into young (n=19) and old (n=22) and between normal- (n=21) and plus-size (n=20) groups.

Subjects were recruited by an independent contractor, [TC]<sup>2</sup> (Textile/Clothing Technology Corporation), where the focus groups were conducted. Subjects were divided into normal- and plus-size groups based on the BMI percentiles for children published by the CDC. BMI scores for children were considered normal up to the 85<sup>th</sup> percentile, while children above the 85<sup>th</sup> percentile were considered to be overweight.

The data were collected during the focus group sessions as follows: mothers and daughters were first scanned, then questionnaires on body image were completed, and finally the mothers and daughters participated in four separate focus groups. The focus groups were made up of normal-size younger (9-11 years) daughters, normal-size older (12-14 years) daughters, plus-size younger (9-11 years) daughters, and plus-size older (12-14 years) daughters. Mothers participated in focus groups consistent with their

daughter's BMI classification. This study analyzed only the data obtained from the questionnaires.

### Demographic Profile

The demographic profiles of the participants are summarized below:

#### *Daughters' profiles*

- Age: The mean ages of the four groups were as follows:
  - Normal-size older group: 13.29 years old (159.45 months)
  - Plus-size older group: 13.55 years old (162.55 months)
  - Normal-size younger group: 10.12 years old (121.40 months)
  - Plus-size younger group: 10.64 years old (127.67 months).
- Ethnicity: Over half of the participants, 61%, were Caucasian followed by African-American (29.3%). The other ethnicities namely Hispanic, Native-American and others, were combined to account for the remaining 9.6% of the sample.
- Age at menarche: of the participants, 46.3% had begun their first period and 53.7% participants had not yet started a menstrual cycle.
- Grade: The daughters' grade range was from 4<sup>th</sup> to 10<sup>th</sup> grade.
- Siblings: Seventeen percent of the participants had no siblings. Approximately, 41.5% of the participants had at least one sister.
- BMI: The daughters' mean BMI was 23.35 for the whole group. The mean BMI of the normal older group was 19.09 and the normal younger was 17.68. The mean BMI of the plus-size older was 29.44 and the plus-size younger was 27.40.

#### *Mothers profiles*

- Age: The mean age was 41.63 years.



- Ethnicity: Approximately 56% of the mothers were Caucasian and 22% were African-American. All other ethnicities, Native-American and others combined, accounted for 4.8 %. Missing or not applicable was 17 %.
- Marital status: Most mothers (78%) were married, followed by divorced (14.6%), and single (4.9%).
- Education: Nearly half of the mothers (48.8%) had a bachelor's or master's degree.
- Income: Nearly 61% of the participants were in the over \$75,000 income range.
- Occupation: Professional categories (Lawyer, Accountant, Teacher) made up 31.7%, the largest group by occupation, followed by Homemaker (24.4%).

### Summary

The specific research questions and discussions of findings are presented below. Most research questions were analyzed using the group as a whole first. Groups were then broken down by BMI into normal- and plus-size groups, and by age into younger and older groups. For research questions from 1 to 6, the Stunkard et al. (1983) set of nine female drawings (from smaller to larger size, numbered 1-9) was used as a stimulus. The research questions from 7 to 14 used a scale which measured the frequency of reading fashion magazines; and examined clothing influentials (mother, father, sister, friend, self), clothing decision factors, the influence of peers in dieting, and feelings about adequacy and appropriateness of daughters' clothing (clothing deprivation scale).

*Research Question 1: Is there a difference between mothers' perceptions of their daughters' body image and the daughters' self-defined body image?*

Paired sample *t* tests were constructed to determine if there was a difference between mothers' perceptions of their daughters' body image and the daughters' self-defined body image. A statistically significant difference ( $p = 0.005$ ) was found between plus-size daughters' self-identification (4.35) and their mothers' identification of their daughters' body image (5.10). Mothers of plus-size girls identified their daughters as being larger than their daughters saw themselves. Mothers of normal-size girls identified their daughters as being smaller than their daughters saw themselves. Although the data for normal-size daughters and their mothers were not statistically significant, the  $p$  value ( $p = 0.06$ ) was close enough to warrant future investigation with a larger sample.

*Research Question 2: Is there a difference between daughters' perceptions of their mothers' body image and the mothers' self-defined body image?*

Paired sample *t* tests were constructed to determine if there was a difference between daughters' perceptions of their mothers' body image and the mothers' self-defined body image. There was a statistically significant difference ( $p = 0.02$ ) between normal-size daughters' perceptions of their mothers' body image (4.33) and their mothers' self-defined body image (3.83). Normal-size girls had significantly larger images of their mothers than their mothers did of themselves. Plus-size girls saw their mothers (5.30) as smaller than their mothers identified themselves (5.62).

*Research Question 3: Is there a difference between mothers' identification of the ideal body size for themselves and their daughters' identification of the ideal body size for adult women?*

Paired sample *t* tests were constructed to determine if there was a difference between the total group of mothers and their identification of the ideal body size for themselves and their daughters' identification of the ideal body size for adult women. There was a significant difference ( $p = 0.01$ ) between mothers' identification of the ideal body size for themselves (3.49) and their daughters' identification of the ideal body size for adult women (4.06). The mean for the normal-size girls was larger (4.11), signifying that their ideal figure for adult women was larger than their mothers' ideal for themselves (3.19), a significant difference ( $p = 0.009$ ). Using the means as descriptors for normal- and plus-size girls and their mothers, there were some interesting similarities and differences between the groups. The two sets of girls, normal- and plus-size, had very similar body ideals for themselves (4.11) and adult women (4.03). The results showed that there were more dynamics for mothers' ideal for self (3.49) and daughters' ideal for adult women (4.06) than daughters' ideal for self (3.8) and mothers' ideal for girls their daughter's age (3.98).

*Research Question 4: Is there a difference between daughters' identification of the ideal body size for themselves and their mothers' identification of the ideal body size for girls their daughters' age?*

Paired sample *t* tests were constructed to determine if there was a difference between daughters' identification of the ideal body size for themselves and their mothers' identification of the ideal body size for girls their daughters' age.

The mothers of plus-size daughters' saw the ideal body size for their daughters' age group almost exactly the same as their daughters did (3.2/ 3.2). Mothers of normal-size daughters chose an ideal body size slightly smaller (2.86/ 3.07) than their daughters did.

*Research Question 5: Is there a difference between mothers' and daughters' dissatisfaction with their own bodies?*

Paired sample *t* tests were constructed to determine if there was a difference between mothers' and daughters' dissatisfaction with their own bodies. The body dissatisfaction scores were determined by finding the difference between the mothers' identification of their ideal size and their perception of their actual size using the drawings of Stunkard et al. (1983). The daughters' body dissatisfaction scores were determined in the same way.

The clearest significant difference between mothers and daughters was in their dissatisfaction with themselves. Overall, the mothers were more dissatisfied ( $p=0.002$ ) with their own bodies (-1.22) compared to daughters' dissatisfaction with their bodies (-0.63). The mothers of plus-size daughters were significantly ( $p = 0.01$ ) more dissatisfied with their bodies than their daughters were with their bodies.

*Research Question 6: Is there a difference between mothers' dissatisfaction with their daughters' bodies and daughters' dissatisfaction with their mothers' bodies?*

Paired sample *t* tests were constructed to determine if there was a difference between mothers' dissatisfaction with their daughters' bodies and daughters' dissatisfaction with their mothers' bodies. The scores for mothers' dissatisfaction with their daughters' bodies were determined by finding the difference between mothers' ideal

for their daughters' age and mothers' identification of their daughters' figure. The body dissatisfaction scores for daughters' dissatisfaction with their mothers' bodies were determined by daughters' choice of ideal figure for adult women and daughters' identification of mothers' figure. Overall, there was no significant difference between mothers' dissatisfaction with their daughters' bodies and daughters' dissatisfaction with their mothers' bodies.

*Research Question 7: a. Is there a relationship between the frequency of the mothers' fashion magazine readings and the mothers' rating of their own ideal figure?*

*b. Is there a relationship between the frequency of the daughters' fashion magazine readings and the daughters' rating of their own ideal figure?*

The frequency of mothers' fashion magazine readings and mothers' ratings of their ideal figure were not related. This study revealed no significant relationships between daughters' fashion magazine readings and daughters' rating of their ideal figure.

The means of mothers' (3.49) and daughters' ideal self (3.15) were similar to each other in this study. The mean of daughters' fashion magazine readings (10.10) was higher than mothers' mean for fashion magazine readings (8.82). The minimum number of fashion magazine readings was 7 and the maximum score was 21 for both daughters and mothers, indicating that the sample participants generally did not read fashion magazines often. The mean score (10.10/ 8.82) fell between *never read it* and *glance through it sometimes*.

*Research Question 8: What are the differences among influentials (mother, father, sister, friend, self) in helping daughters decide what clothes to buy and wear?*

Mothers exerted the greatest influence on their daughter's decisions as to what clothes to buy (75.6%). However, more than half of the daughters made clothing decisions by themselves (53.7%). Sisters (24.4%) and friends (14.6%) were somewhat influential in clothing decisions. For what clothes to wear, girls indicated that they most often decided by themselves (60.9%). Mothers (56.1%), followed by friends (36.6%) and sisters (24.4%) were also influential concerning girls' decisions about what to wear. Fathers had the least influence on what to buy or wear.

There was a significant difference between younger and older girls for mothers' influence on what to wear. Older girls were significantly more likely than younger girls to decide by themselves what clothes to wear. There was only one significant difference between the normal- and plus-size girls in terms of what to buy or wear. Normal-size girls were more likely to decide what to buy by themselves than were plus-size girls.

*Research Question 9: Is there a difference between mother's and daughter's ranking of clothing decision factor for what to wear?*

Paired sample *t* tests were computed to determine if there was a difference between mothers' and daughters' ranking of clothing decision factors for what to wear. Analysis of the total sample showed that mothers and daughters differed significantly on the importance of clothes that fit well, clothes that were comfortable, the newest fashions, and what friends would be wearing when the girls decided what clothes to wear. Means of decision factors for clothes that fit well (4.34/ 3.59) and were comfortable (4.05/ 3.56) showed that the daughters felt these factors were more important than did their mothers.

However, the means for decision factors for clothes that were the newest fashions (2.80/3.37) and clothes that friends would be wearing (2.07/3.24) indicated that mothers thought these factors were more important than their daughters indicated.

There were differences between normal- and plus-size daughters and between younger and older daughters and their mothers. An explanation of normal-size, plus-size, older, and younger girls and their mothers' perceptions in ranking clothing decision factors for what to wear follows.

*Normal- size adolescents and their mothers*

Figure 8 shows that normal-size adolescents considered *fit* as the most important factor in clothing decisions followed by *clothes that look best on me*, *clothes that are comfortable*, *a favorite color*, *the newest fashion*, *a popular brand name*, and *what friends would be wearing*. However, mothers of normal-size adolescents felt their daughters considered different factors when their daughters chose clothing, namely what they felt *looked best* on them, followed by *clothes that fit me well*, *clothes that are comfortable*, *the newest fashion*, *clothes that are a favorite color*, *what friends would be wearing*, and *a popular brand name*. Normal-size adolescents reported considering *what friends would be wearing* as the least important factor when deciding what clothes they would wear. Their response was significantly different ( $p = 0.003$ ) from what their mothers thought (respective means of 2.00 and 3.14).

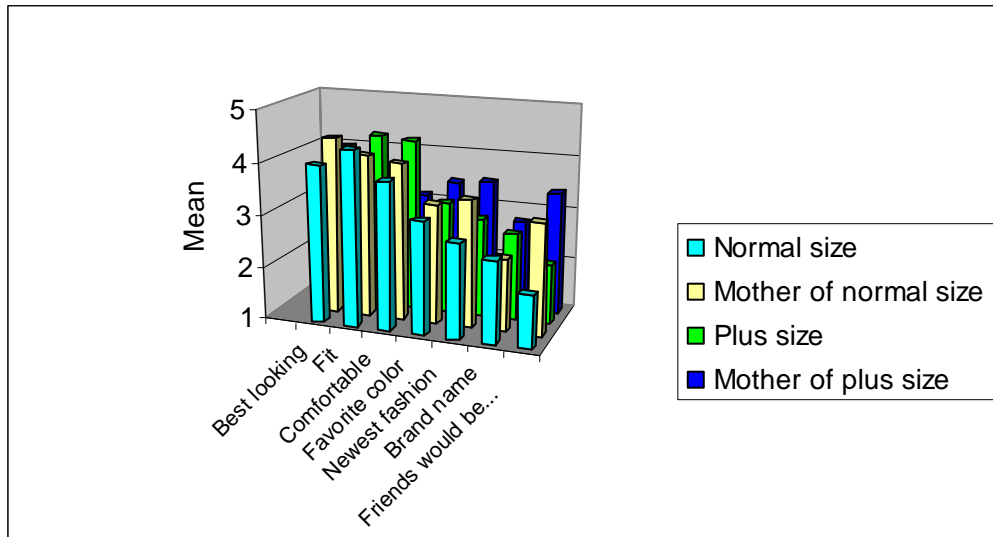


Figure 8. Clothing decision factors for what to wear by normal- and plus-size girls

*Plus-size adolescents and their mothers*

Figure 8 shows that plus-size adolescents between 12 and 14 years considered *fit* to be the most important decision factor followed by *comfort*, *clothes that look best on them*, *their favorite color*, *the newest fashion*, *popular brand names*, and *what their friends would be wearing* when deciding what clothes to wear. However, mothers of plus-size adolescents thought that their daughters would consider *the newest fashion*, followed by *their favorite color*, *clothes that look best on them*, *what friends would be wearing*, *comfort*, *fit*, and *a popular brand name* when deciding what clothes to wear. Mothers of plus-size daughters were significantly different from their daughters on *fit well*, *clothes that are comfortable*, *look best on me*, and *friends would be wearing* for the clothing decision factors for what to wear.

*Younger adolescents and their mothers*

Younger adolescents (9 to 11 years) ranked *clothes that fit well* followed by *clothes that were comfortable*, *looked best on them*, *were their favorite color*, *the newest*



*fashion, a popular brand name, and those that friends would be wearing* as important factors when deciding what clothes to wear.

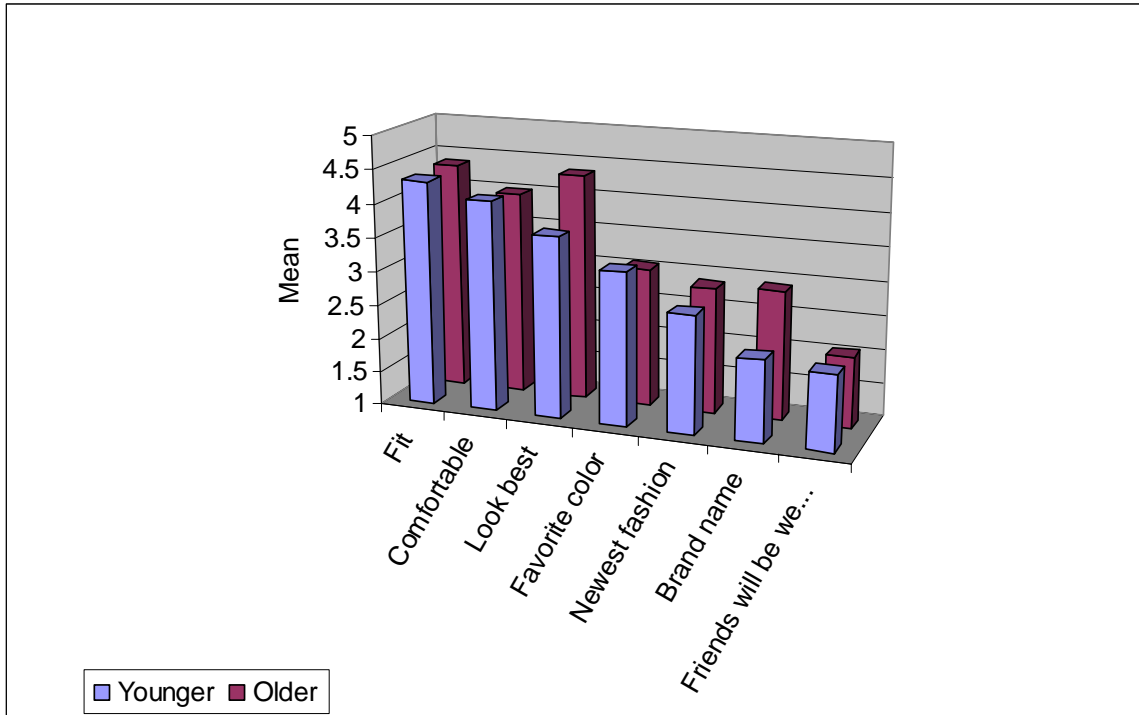


Figure 9. Clothing decision factors by younger and older girls

Mothers of younger daughters ranked their daughters' clothing decision factors differently. They ranked *clothes that look best on me*, followed by *clothes that are comfortable, fit well, favorite color, what friends would be wearing, the newest fashion, and popular brand name*. There is a difference between the importance of fit in clothing choice between younger daughters and their mothers, as younger daughters chose fit as a greater priority when they decided what clothes to wear. There was also a significant difference ( $p= 0.003$ ) between younger daughters and their mothers when they ranked *what friends would be wearing*. Mothers ranked *what friends would be wearing* as more influential in clothing decisions than did their daughters (2.11 versus 3.05).

### *Older adolescents and their mothers*

The older adolescents (12 to 14 years) in this study most frequently ranked *fit* and *clothes that look best on me* as important in decision making, followed by *comfort*, *favorite color*, *a popular brand name*, *the newest fashion*, and *what friends would be wearing*. Overall, both younger and older daughters considered *what friends would be wearing* as the least important factor when deciding what clothes to wear. They significantly differed from their mothers in how they rated the importance of clothing that was *the newest fashion* (2.86 versus 3.73) and clothes that *friends would be wearing* (2.05 versus 3.41).

*Research Question 10: Is there a relationship between girls' dissatisfaction scores and clothing decision factors of what clothes to wear?*

Pearson's correlation was calculated between daughters' dissatisfaction scores and each of the clothing decision factors. The daughters' body dissatisfaction scores were determined using the Stunkard et al. (1983) scale to calculate the difference between the girls' identification of an ideal size and their perception of their actual size.

There was a significant but negative correlation ( $r = -0.34, p = 0.029$ ) between girls' body dissatisfaction scores and their interest in choosing clothes that were comfortable. The negative correlation means that as one variable increased, the other variable decreased. The more girls were dissatisfied with their bodies, the more likely they were to rate comfort above other factor in making clothing decisions. Though no significant differences were found when the groups were separated into normal, plus, younger and older, responses from other research questions may provide some insight regarding clothing decision factor choices. There was a statistically significant difference

between normal and plus-size daughters' body dissatisfaction. Normal-size adolescents' score for body dissatisfaction with self was -0.17, while plus-size adolescents' body dissatisfaction with self scores was -1.13. Overall, plus-size daughters were significantly more dissatisfied with their own bodies than normal-size girls in this study. The mean responses for comfort between normal (3.72)- and plus-size girls (4.32) show that plus-size girls rated comfort more highly than normal-size girls.

*Research Question 11: Do mothers correctly perceive their daughters' weight concerns?*

Non-parametric binominal tests were computed to determine whether mothers correctly perceived their daughters' weight concerns. There were eight pairs of questions for which responses were categorical, either yes or no. There was significant agreement between mother and daughters for six of the eight pairs of questions, namely Question pair 1: Has your daughter ever wanted to be thinner? Have you ever wanted be thinner? ( $p = 0.027$ ) Question pair 2: Have you ever wanted your daughter to be thinner? Have you ever wanted to be thinner? ( $p = 0.03$ ); Question pair 3: Has your daughter ever wanted to be heavier? Have you ever wanted be heavier? ( $p = 0.000$ ); Question pair 4: Have you ever wanted your daughter to be heavier? Have you ever wanted be heavier? ( $p = 0.001$ ); Question pair 7: Has your daughter ever tried to gain weight? Have you ever tried to gain weight? ( $p = 0.000$ ) and Question pair 8: Have you ever encouraged your daughter to gain weight? Have you ever tried to gain weight? ( $p = 0.000$ ).

The results show agreement between mothers' and daughters' answers and indicate that they understand each other very well regarding issues of thinness. However, only 54% of mothers and daughters agreed on weight loss. While only 12 (60%) of mothers of plus-size daughters said that they had encouraged their daughters to lose

weight and thought that they had tried to lose weight, 17 (85%) of the plus-size daughters indicated that they had in fact tried to lose weight. Approximately half of the normal-size girls had tried to lose weight, but 86% of their mothers said that they had not. Only one mother of a normal-size girl had encouraged her to lose weight.

*Research Question 12: Is there a relationship between the daughters' perception of their own body image and their mothers' involvement?*

Pearson's correlation was computed between the daughters' perceptions of their own body image and mothers' involvement. The daughters' perceptions of their body image was measured by Blyth et al. (1985) Satisfaction with Body Image Scale, with responses ranging from 1 (not at all happy) to 4 (very happy). The mother's involvement was measured using two items from Levine et al.'s (1994) PARINV scale, with response scores ranging from 2 (minimum) to 5 (maximum).

There was no significant relationship between the daughters' perceptions of their body image and their mothers' involvement. However, there were differences between plus-size younger (12.22) and plus-size older (9.09) girls' perceptions of body image. The minimum score for perception of body image was 4 and the maximum was 16. Total scores could be interpreted as not at all happy (from 4 to 7), somewhat happy (from 8 to 10), happy (from 11 to 13), and very happy (from 14 to 16). Plus-size older girls' perceptions of body image scores showed that they were somewhat happy with their height, weight, development, and attractiveness. This differed from younger girls, who indicated that they were happy with their height, weight, development, and attractiveness. Plus-size younger girls were more satisfied or happy with their height, weight, development, and attractiveness than plus-size older girls.

Normal-size younger girls' perceptions of body image scores (11) indicated they were happy with their height, weight, development, and attractiveness. Normal-size older girls' perceptions of body image scores (11.36) also places them as happy with their height, weight, development, and attractiveness. Both normal-size younger and older girls' perceptions of body image were similar, while plus-size older girls were less satisfied with their bodies. This study did not find a relationship between girls' perceptions of body image and their mothers involvement or concern about their daughter's weight and body image.

*Research Question 13: Is there a relationship between daughters' perceptions of their friends' weight concerns and their own body image?*

Pearson's correlation was computed between the daughters' perceptions of their friends' weight concerns and their own body image. MANOVA was performed between normal- and plus-size girls and younger and older girls and their relationship between their perceptions of their friends' weight concerns and their own body image.

The daughters' perceptions of their own body image was measured by Blyth et al.'s (1985) Satisfaction with Body Image Scale, with responses ranging from 1 (not at all happy) to 4 (very happy) for happiness with height, weight, development, and attractiveness. The friends' perception of weight concern scores came from the PEERDIET scales that best describe the girls' perceptions of their friend's concern with weight, with scores ranging from 1 (none) to 5 (all). The possible minimum score was 4 and the maximum score was 20. The total scores, from none (4 to 7.2), a few (7.3 to 10.4), about half (10.5 to 13.6), most (13.7 to 16.8), to all (16.9 to 20), measured the girls' perceptions of their friends' interest in weight and dieting. The mean score of their

perceptions of their friends' weight concerns was 11.05, indicating that about half of their friends seriously thought about being thinner, issues of weight and dieting. This study found that there was a significant negative correlation ( $r = -0.302, p = 0.05$ ) between girls' perception of their own body image scores and their perceptions of their friends' weight concerns (PEERDIET) for the whole sample. As body image for the whole group score grew more negative, girls' perceptions of their friends' weight concerns increased.

There was a statistically significant difference between younger and older girls in the relationship between their perceptions of body image and their perceptions of their friends' weight concerns, at  $p = 0.025$  (Wilk's Lambda). More specifically, there was a statistically significant ( $p = 0.021$ ) difference between younger and older girls' perceptions of body image. There was a statistically significant ( $p = 0.05$ ) difference between younger and older girls' perception of friends' weight concerns.

*Research Question 14: Is there a relationship between daughters' body dissatisfaction and clothing deprivation?*

Pearson's correlation was computed for the daughters' body dissatisfaction and level of clothing deprivation. The clothing deprivation scores on each of the three questions ranged from 1 (never) to 5 (always) and explored how often the girls felt that they do not have or can not get clothes that they would chose to wear for three occasions, namely school, doing things with friends, and dress-up clothes. The minimum possible score was 3 and the maximum score was 15. The total scores could be interpreted as follows: never (3 to 5.4), sometimes (5.5 to 7.8), half of the time (from 7.9 to 10.2), usually (from 10.3 to 12.6), and always (12.7 to 15).

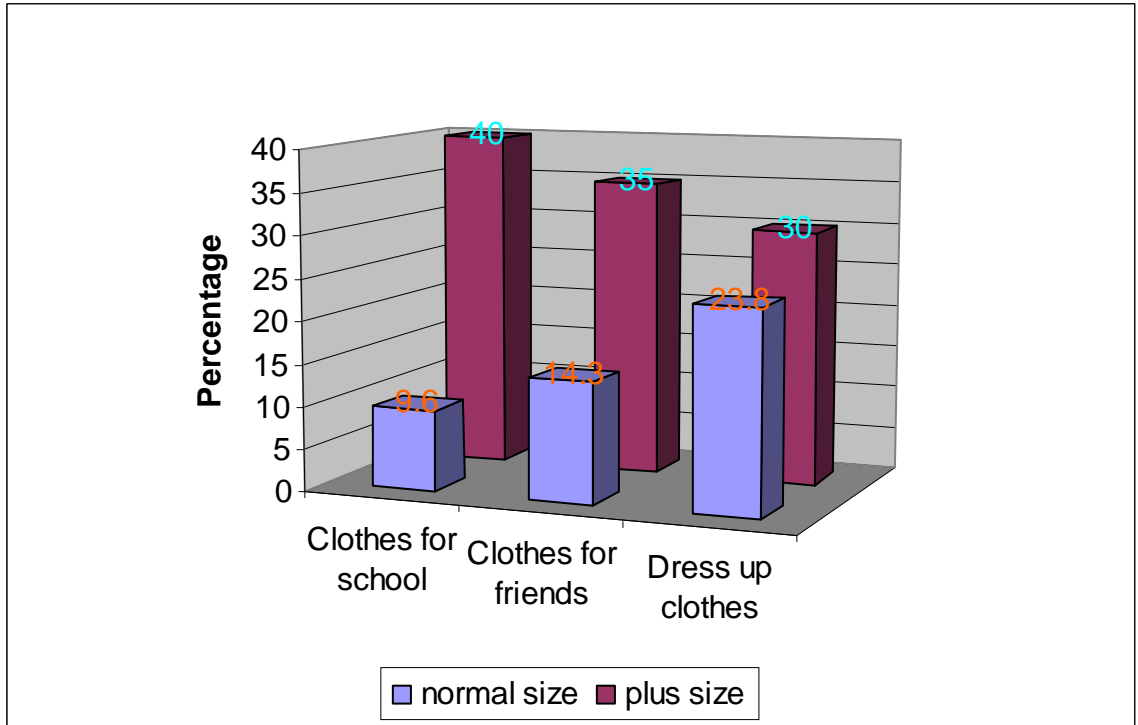


Figure 10. Normal- and plus-size girls clothing deprivation

Overall, there was no significant relationship between the daughters' body dissatisfaction and clothing deprivation. A MANOVA was performed between normal- and plus-size daughters and younger and older daughters and the relationship between their body dissatisfaction and clothing deprivation. There was a statistically significant difference ( $p = 0.001$ ) between normal- and plus-size girls in how they related to body dissatisfaction and clothing deprivation. There were no significant findings between younger and older girls. The mean score for clothing deprivation (7.46) shows that all the girls sometimes can not get clothes that they would choose to wear.

Approximately 27% of the sample indicated they can not get or did not have dress-up clothes suitable for school dances or attending a wedding. Twenty-four percent did not feel they had clothes they would choose to wear for activities with friends, and

24.4% felt they did not have clothes for school that they would choose to wear. However, the greatest differences in deprivation scores were found between normal- and plus-size girls, as shown in Figure 10. Plus-size girls indicated much higher levels of clothing deprivation for all categories, including clothes for school, clothes to wear with friends, and dress-up clothes.

## Discussion

### *Perceptions of ideals for body image using Stunkard, Sorenson, and Schulsinger's (1983) scale*

Significant differences between how mothers saw their daughters and how daughters saw themselves emerged only for the plus-size group. These girls self-identified their bodies as slightly smaller than the midpoint (4.35) on the nine-point scale, whereas their mothers saw them as slightly larger than the fifth figure. Mothers of normal-size girls saw their daughters as being smaller than how the girls saw themselves, and that difference (2.90 vs. 3.24) was almost significant.

Cohn et al. (1987) used the Stunkard et al. (1983) scale in their study of 10.5- to 15-year-old adolescent girls (mean age of 13 years). These 288 girls, who were slightly older than the sample in this study and were not divided into normal- and plus-size groups, rated their body size as 3.5 on average. The mean self-image for all of the girls in this research, approximately half below the 85<sup>th</sup> percentile (for BMI and age) and half above it, was 3.8, relatively close to that of the 1987 report.

When comparing how daughters saw their mothers in relation to the mothers' self-image, significance was found only for the normal-size group. In this case, it was the daughters who saw their mothers as larger by a half-size; the mothers saw themselves as



being smaller than the fourth figure, and the girls saw them as being larger than the fourth figure.

There was more commonality in identifying ideals for the girls' figures than in perceptions of size. The plus-size girls' ideal for themselves (3.22) was only slightly larger than that for the normal-size girls (3.07), suggesting that larger actual size did not greatly affect the girls' ideal. Cohn et al.'s study (1987) of 10.5 to 15 year old girls found that on average they had a preference for thinness. In this study, the girls' pick was the third of the nine figures. Mothers' ideals for their daughters' size were very similar (2.86 for the normal-size group and 3.2 for the plus-size group). There was no significant difference between girls' ideal for themselves and their mothers' ideal for their daughters' age. Thus, no matter what the daughters' actual size, normal or plus, girls and their mothers appeared to have a relatively narrow range of ideal body sizes. Some studies in the past have suggested body image links between mothers and daughters. Using a different visual scale, Wilson et al. (1994) found female adolescents' perception of ideal body size appeared to be related to their mothers' size (and other factors). Thelen and Cormier (1995) found a relationship between fourth grade girls' weight and desired weight and their mothers' concerns about weight.

Normal- and plus-size girls' ideals for adult women were close in number (4.11 and 4.03) and approximately one figure size larger than their ideals for themselves. However, the girls' adult ideals were larger than their mothers' ideals for themselves, and significantly so for the normal-size group, as well as for the two groups combined. This could mean that the girls did not expect adult women to be as slender as their mothers expected, or it could simply mean that the girls saw themselves as not fully grown.

### *Mothers' and Daughters' Body Dissatisfaction*

Two established methods were used in this study to measure body dissatisfaction. Stunkard et al.'s (1983) nine female drawings were applied as a visualization tool for girls and their mothers, while Blyth et al.'s (1985) Satisfaction with Body Image Scale offered a verbal measure of happiness with height, weight, development, and attractiveness for the girls. Application of the visualization scale revealed that the mothers were significantly more dissatisfied with their own bodies than their daughters were with their own bodies. A significant difference held for the plus-size group and nearly did for the normal-size group. The girls and their mothers were not, however, significantly different in their dissatisfaction with each other. Although some researchers have looked at the relationships between mothers and daughters in terms of weight concerns and body size and shape ideals, their levels of dissatisfaction do not appear to have been compared before this study. Since these factors are interrelated, further study could provide more insights.

The stated purpose of this study was to explore the relationship between mothers and daughters. This was carried out with the research sample by first looking at all participants, and then considering sub-groups of normal- and plus-sizes and younger and older girls. Additional independent sample *t* tests were performed and revealed a significant difference ( $p = 0.001$ ) between normal-size girls' dissatisfaction with their own bodies (-0.17) and plus-size girls' dissatisfaction with their bodies (-1.13). There was also a statistically significant difference in self-dissatisfaction ( $p = 0.001$ ) between mothers of normal-size daughters (-0.64) and mothers of plus-size daughters (-1.83).

Although no significant differences between mothers and daughters were found for each one's dissatisfaction with the other, additional independent sample *t* tests comparing each group of girls and each group of mothers identified differences. Plus-size girls were significantly more dissatisfied with their mothers' bodies than normal-size girls were with their mothers' bodies ( $p = 0.02$  for respective means of -1.27 and -0.24). The mothers of plus-size girls were significantly more dissatisfied with their daughters' bodies than were the mothers of normal-size daughters ( $p = 0.00$  for means of -1.90 and -0.05). All of these differences between the normal- and plus-size groups provide reasons for further research on this topic.

In addition to the assessment of dissatisfaction using the visual scale, the results from the Satisfaction with Body Image verbal scale (Blyth et al., 1985) suggested that plus-size girls were less satisfied with their height, weight, development, and attractiveness than normal-size girls. Looking at the girls divided into size and age groups, the findings for this measure were that the plus-size 9-11-year-olds were the most satisfied, and the plus-size 12-14 year olds were the least satisfied. Between them, the 12-14-year-old normal-size girls were slightly more satisfied than the 9-11-year-olds. In Cohn et al.'s study (1987) using the visual scale, girls with more advanced pubertal levels showed a greater discrepancy between current and ideal figures than did less developed girls. The older girls (seventh and eighth grade) chose slightly thinner figures than did younger ones (sixth grade). More than 20 years later, this research seems to yield similar results. Perhaps the younger plus-size girls were more likely to have developed a more womanly figure, thus increasing their satisfaction.

This study did not include a measure of generalized self-esteem. Usmiani and Daniluk (1997) concluded that higher self-esteem came from a positive body image and positive attitudes of girls toward their mothers. With a growing segment of the adolescent population being overweight or obese, more research into body image, dissatisfaction, and self-esteem among plus-size girls and in relation to their mothers is warranted.

#### *Fashion magazines and body image*

No statistically significant relationships between the level of reading fashion magazines and the identification of an ideal figure were found for girls or their mothers in this study. Levine et al. (1994) reported a relationship for adolescent girls with a mean age of 13.20 years. Their results showed that 61% of the girls read at least one fashion magazine regularly and considered them an important source of information about ideal shape, diet, fitness, and beauty. According to Jones, Vigfusdottir, and Lee (2004), adolescent girls aged 11 to 14 years are significantly more engaged with appearance-related magazines and more likely to internalize the beauty ideals in them, and expressed greater body dissatisfaction than boys. The mean frequency of reading fashion magazines for the girls in the present study, which fell between *never* and *glance through it sometimes*, seems to contradict both of those studies. Today, both adolescents and parents can be exposed not only to print media such as fashion magazines, but also to information and images coming from the Internet, and the many stations on cable television. The measurement of influences may thus need to be broadened beyond only magazines. Future studies could measure the effects of various types of media exposure to investigate possible relationships between identification of ideal figures and the media.

*Who influences what girls buy and wear*

When choosing what to buy, the girls said that their mothers more than anyone else helped them decide; secondly, they relied on themselves. When choosing what to wear, they relied on themselves slightly more than their mothers. Friends were not as important, but they helped in the decision-making for what to wear more frequently than for what to buy.

The scale used in this study was adapted from May (1982), whose study of boys and girls aged 9 to 19 years, revealed that parental influence on clothing purchases dropped and making decisions on their own increased as they got older (May & Koester, 1985). The present study found little difference between the younger and older girls in terms of how much they relied on their mothers or themselves in deciding what to buy. However, the older girls were more likely to rely on themselves and less likely to consult their mothers in terms of what to wear.

Moschis et al. (1977) reported that adolescents were likely to depend on adult family members when purchasing high-priced or socially risky items. Simpson (1994) found that adolescents generally decided by themselves when purchasing from catalogs. Since few studies, spaced out over decades, have examined these issues, more research certainly is justified.

Research going back to the 1960s found that adolescents display a strong desire for peer approval and acceptance, maintaining that the peer group is the most important influence on adolescents because they may wish to dress like their friends in order to be accepted (Ryan, 1966; Smucker & Creekmore, 1972; Washington Agricultural Experiment Station, 1972). The findings in the present study, where friends played a

more important role in deciding what to wear than what to buy, somewhat support the established view on peer influence. On the other hand, the greater role seemingly played by mothers and making their own decisions appears to weaken the importance of friends. Further research might explore these issues in greater detail.

This study is the first known research to look at clothing decision-making in relation to normal- and plus-sizes. Although only one significant difference was found, a greater self-reliance in purchase decisions on the part of normal-size girls, the topic warrants more study.

*Clothing decision factors for what to wear (Best looking, Fit, Comfortable, Favorite color, the Newest fashion, Popular brand name, and Friends would be wearing)*

The scale used in the present study was adapted from May (1982). Because her scale did not include fit, this was added; the factor “clothes that are clean” was deleted because it was primarily related to laundry practices. May included a fit factor in a separate question which listed purchase factors and found that fit was the most important consideration when her subjects purchased their clothes. For girls aged 9-15 years, she found the following rank order of factors for selecting clothes to wear: clean, look best, comfort, fashionable, favorite color, and brand (May & Koester, 1985).

The present study examined the wearing decision factors for girls and the perceptions of mothers as to their daughters’ behaviors. The girls’ responses showed that two decision factors, *clothes that fit well* and *clothes that are comfortable*, were more important than their mothers indicated for their daughters. According to Smathers and Horridge (1978-79), well-fitted clothing is vital to an individual’s psychological and social well-being. Branson and Sweeney (1991) defined clothing comfort as a state of

satisfaction indicating psychological, social psychological and physical balance for a person, his/her clothing, and his/her environment. In this study, no definitions of comfort or fit were offered to the participants. The emergence of these two factors as being important to the girls suggests the need for future study of what having clothes that fit well and clothes that are comfortable means to adolescent girls.

The mothers in this study thought that two factors, *newest fashion* and *what friends would be wearing*, were more important to their daughters than the girls' responses in fact indicated. Further research should explore both sets of differences between mothers and daughters. It remains an open question as to whether the mothers are good observers of their daughters' behaviors or their responses reflect popular beliefs about adolescents. The previous research question revealed that just over one-third of the girls said that friends usually or always helped them to decide what to wear, making them less important than mothers and themselves.

The girls' decision factor scores were compared to their body dissatisfaction scores. There was a significant negative correlation between girls' body dissatisfaction and choosing clothes that are comfortable. Thus, the greater the dissatisfaction, the more important choosing comfortable clothes was. Fit was actually ranked the most important factor by both plus- and normal-size girls, with respective scores of 4.35 and 4.33 on a 5 point scale. Not unexpectedly, the plus-size girls had greater body dissatisfaction, so the significance of the relationship between comfort and body dissatisfaction makes it all the more important to identify what adolescent girls mean when they say "comfortable."

*Daughters' weight concerns and their mothers' perceptions and encouragement of weight concerns*

Mothers generally correctly perceived their daughters' weight concerns in terms of wanting to be thinner, not wanting to be heavier and not trying to gain weight. Mothers did not, however, have such a clear understanding of their daughters when it came to losing weight. Two-thirds of normal-size girls wanted to be thinner, but 85% of plus-size girls particularly wanted that, and their mothers knew it. Eisele et al. (1986) found that 78% of their 12 to 14 year old sample of girls preferred to weigh less, and only 14% reported that they were satisfied with their current weight. Although the mothers understood their daughters' desire for thinness, they did not fully grasp the impact of that desire on their daughters' efforts to lose weight. Compared to the mothers of normal-size girls, the mothers of plus-size girls were better at perceiving that their daughters had tried to lose weight; they also were more likely to have encouraged that behavior. Overall, these results seemed to support the reality for these adolescents of a cultural awareness that thinness is a symbol of beauty and success (Heinberg & Thompson, 1995; Silverstein & Perdue, 1988; Smolak & Murnen, 2001).

*Clothing deprivation*

Many researchers (Kelly & Eicher, 1970; Littrell & Eicher, 1973; Ryan, 1966; Smucker & Creekmore; 1972) concluded that social isolation resulting from clothing choice deprivation and appearance negatively affects the adolescent stage. An inability to dress the part can produce emotional and psychological stress in adolescents (Kness, 1983). Francis (1992) found that clothing deprivation had a significant effect on social participation and social competence.



A significant difference was found between the plus- and normal-size girls in this study in terms of the relationship between body dissatisfaction and clothing deprivation. Plus-size girls felt more deprived than normal-size girls. Four times more plus than normal-size girls (40% vs. 10%) usually or always felt that they did not have clothes to wear to school. More than twice as many (35% vs. 14%) usually or always felt that they did not have clothes to wear while doing things with friends. The margin for dress-up clothes was narrower (30% vs. 24%). This suggests that plus-size girls may not only feel the onus of being more dissatisfied with their bodies and wanting to be thinner, they also may experience the emotional stress that comes from feeling that they do not have the clothes to fit in with their adolescent peers.

#### Conclusions

The purpose of this study was to explore the mother–daughter relationship and its influence on clothing behavior issues and body image satisfaction/ dissatisfaction for normal- and plus-size tween girls. The rate of obesity among adolescents has tripled in the U.S. in just the last two decades. Due to the increasing number of plus-size girls, a better understanding of their perception of their bodies in relation to their peers and their mothers is an important step in understanding the impact of obesity. The findings from this study indicated that body dissatisfaction seems to affect clothing behavior and feelings of clothing deprivation. Clothing becomes a part of the body image, and the same concerns that are attached to the body are often attached to clothing (Smucker & Creekmore, 1972; Horn & Gurel, 1981).

From this study, plus-size girls and their mothers' body image and clothing behavior issues were significantly different from those of normal-size girls and their

mothers. Normal and plus-size girls ideal for self were almost same, but mothers of plus-size girls saw their daughters more negatively than did mothers of normal-size girls. As a group, plus-size girls were much more dissatisfied with their bodies than normal girls were.

The significant body dissatisfaction of plus-size girls was also related to the greatest level of clothing deprivation within all three categories tested: clothes for school, dress-up clothes, and clothes for friends. Clothing is first and foremost a visible means of covering the body and has been referred to as the second skin. Clothing selection is an everyday life decision. Clothing deprivation may therefore cause daily stress for girls with negative body images and negatively affect their emotional, social, and psychological mood perspective. The higher their body dissatisfaction, the more important comfort was for the girls. Normal-size girls were also more self reliant in clothing purchasing.

Through their interaction with their mothers, daughters learn their mothers' values regarding clothing and body image, which is thus likely to influence their own attitudes about their gender and approaching womanhood. Mothers of plus-size girls were significantly more dissatisfied with their own bodies and their daughters' bodies than mothers of normal-size girls. Mothers who have positive attitudes toward their body image, high self-esteem, and healthy dieting behaviors may be more likely to positively influence their adolescent daughters' development in such areas as self-esteem, socialization, and social activities.

## Limitations

The small sample size limits the conclusions reached by this study, but the results suggest the value of further study using a larger sample. This sample is limited by gender in order to obtain a better understanding of issues concerning the body image and self-esteem of girls. Since comparable studies of boys do not exist, gender comparisons are limited. Likewise, though the study included racially mixed participants, the sample was too small for any consideration of possible racial implications for body image. This sample is also limited by geographic location.

## Implications and Recommendations

Understanding the relationships of mothers and daughters in the tween market segment has direct implications for apparel manufacturers and retailers. Plus-size girls showed significantly more clothing deprivation for clothes for school, clothes for friends, and dress-up clothes than normal-size girls. Though this study did not fully explore the reasons for their feelings of clothing deprivation, the girls ranked comfort and fit as their two major decision factors when shopping for clothing. The choices for appropriate clothing for plus-size girls appear to be limited, and fit and comfort were more important decision factors than brand for these girls. Manufacturers may want to more fully explore the range of issues that impact this market.

Few studies have focused on the relationship between body image and self-esteem for mothers and daughters. This appears to be particularly important for plus-size adolescent girls, as this study indicates that there are significant differences between mothers and daughters in the normal-size group and mothers and daughters in the plus-size group. More study with larger groups could better define the group as a whole.

A number of scales were used to look at body image, clothing satisfaction, clothing influentials, and clothing decision factors for both daughters and their mothers. Understanding the application of these scales in this study may help researchers formulate other studies to more fully explore the underlying issues around mothers' and daughters' body image and self-esteem. The Stunkard et al. (1983) body image scale was used as a stimulus for both mothers' and daughters in the identification of body image. These scales have limitations in that they are line drawings. Body image could be explored using the more realistic images provided by body scans in the future.

May's (1982) scale on clothing decision factors provides a basis for exploring the factors that are important to tweens in deciding clothing purchases. Fit and comfort, which emerged as important from the scale, need to be explored in greater depth in terms of their precise meaning for the girls who select them. More thorough definitions for these terms would be helpful in future research.

This research attempted to understand the impact of the media, specifically fashion magazines, on body image. However, this sample indicated low participation in reading fashion magazines. It is recommended that in future studies, a broader perspective of media should be included in the questionnaire to aid in understanding whether ideal figures and body self esteem are related to media figures.

The participant's ethnicities for this study were racially mixed between Caucasian and African-American participants. Since research indicates that there are racial differences with respect to personal body image, a similar study with a larger group might focus on distinct racial profiles to determine if race is an issue for body image for tween girls.

Though tween girls and their mothers were the focus of this research, body image and self-esteem is also important for boys. A more thorough exploration of how boys feel about body image and self-esteem could add to a greater understanding of this group as a whole.

## REFERENCES

- Abramovitz, B.A., & Birch, L.L. (2000). Five year old girls' ideas about dieting are predicted by their mothers' dieting. *Journal of the American Dietetic Association*, 100(10), 1157-1163.
- Agras, W.S. & Kirkley, B.G. (1986). Bulimia: theories of etiology. In K. D. Brownell & J.P. Foreyt (Eds), *Handbook of eating disorders* (pp. 367-378). New York: Basic Books.
- Attie, I., & Brooks-Gunn, J. (1989). Development of eating problems in adolescent girls: A longitudinal study. *Developmental Psychology*, 25 (1), 70-79.
- Blyth, D.A., Simmons, R.G., & Zakin, D.F. (1985). Satisfaction with body image for early adolescent females: The impact of pubertal timing within different school environments. *Journal of Youth and Adolescence*, 14(3), 207-225.
- BMI for age*. (2005). Retrieved May 31, 2004 from <http://www.cdc.gov/nccdphp/dnpa/bmi/bmi-for-age.htm>
- Bolton, M.J. (1970). A study of the clothing of first grade children in a low income situation. Unpublished master's thesis, University of Tennessee.

- Bowerman, C. E. & Kinch, J. W. (1959). Changes in family and peer orientation of children between the fourth and tenth grades. *Social Forces*, 37, 206-211.
- Branson, D.H., & Sweeney, M. (1991). Conceptualization and measurement of clothing comfort: Toward a meta theory. In S. Kaiser & M.L. Damhorst (Eds.), *Critical linkages in textiles and clothing: Theory, method and practice* (pp. 94-105). Monument CO: International Textiles and Apparel Association.
- Brawley, B.J. (1971). Feelings of clothing deprivation as related to self-concept and peer acceptance among black and white fourth grade girls. Unpublished master's thesis, University of Tennessee.
- Bretwon, B.J. (1971). The relationship between feelings of clothing deprivation, self concept, and peer acceptance among fourth grade black male students from three socioeconomic levels. Unpublished master's thesis, University of Tennessee.
- Brodie, D.A., Bagley, K., & Slade, P. D. (1994). Body image perception in pre and postadolescent females. *Perceptual and Motor Skills*, 78, 147-154.
- Brooks-Gunn, J., Burrow, C., & Warren, M.P. (1988). Attitudes toward eating and body weight in different groups of female adolescent athletes. *International Journal of Eating Disorders*, 7(6).
- Brooks-Gunn, J. & Warren, M.P. (1985). The effects of delayed menarche in different contexts: Dance and nondance students. *Journal of Youth and Adolescence*, 14, 285-300.
- Brown, T.A., Cash, T.F., & Mikulka, P.J. (1990). Attitudinal body image assessment: Factor analysis of the body self relations questionnaire. *Journal of Personality Assessment*, 55 (1&2), 135-144.

- Bulck, J.V. (2000). Is Television bad for your health? Behavior and body image of the adolescent “couch potato.” *Journal of Youth and Adolescence*, 29 (3), 273-288.
- California State Department of Education. (1987). *Caught in the middle: Educational reform for young adolescents in California Public Schools*. Sacramento: author
- Calasibetta, C.M. (1988). *Fairchild's Dictionary of Fashion 2<sup>nd</sup>*. New York: Fairchild Publications
- Cannon, K.L., Staples, R., & Carlson, I. (1952). Personal appearance as a factor in social acceptance. *Journal of Home Economics*, 44, 710-713.
- Cash, T.F. (1994). Body image attitudes: Evaluation, investment, and affect. *Perceptual and Motor Skills*, 78, 1168-1170.
- Cash, T.F., Winstead, B.A., & Janda, L.H. (1986). Body Image survey report: The great American survey. *Psychology Today*, 19, 22-26.
- Cheek, W.K. (1978). Clothing deprivation, clothing importance, and self-concept of low socioeconomic fourth grade students enrolled in two types of schools. Unpublished doctoral dissertation, Ohio State University.
- Cohn, L. D., Adler, N. E., Irwin, C. E., Millstein, S. G., Kegeles, S. M., & Stone, G. (1987). Body-figure preferences in male and female adolescents. *Journal of Abnormal Psychology*, 96, 276-279.
- Collins, M. E. (1991). Body figure perceptions and preferences among preadolescent children. *International Journal of Eating Disorders*, 10, ( 2), 199-208.
- Creekmore, A.M. (1966). Methods of measuring clothing variables. Michigan Agricultural Experiment Station Project Number 783, 1966.



- Curtis, A. (1991). Perceived similarity of mothers and their early adolescent daughters and relationship to behavior. *Journal of Youth and Adolescence*, 20 (3), 381-397.
- Daters, C.M. (1990). Importance of clothing and self-esteem among adolescents. *Clothing and Textiles Research Journal*, 8(3), 45-50.
- Davis, E., & Furnham, A. (1986). Body satisfaction in adolescent girls. *British Journal of Medical Psychology*, 59, 279-287.
- Duff, M. (2002). Big Three refocus lines to meet tweens' growing influence. *DSN Retailing Today*, 41(6),19
- Eisele, J., Hertsgaard, D., & Light, H. K. (1986). Factors related to eating disorders in young adolescent girls. *Adolescence* 21, 283-300.
- Fallon, A., & Rozin, P. (1985). Sex differences in perceptions of desirable body shape. *Journal of Abnormal Psychology*, 94, 102-105
- Featherstone, M. (1994). *Kultur, kropp, konsumtion*. Symposion, Stockholm.
- Feldman, W., McGrath, P., & O'Shaughnessy, M. (1986). Adolescents' pursuit of thinness. *American Journal of Diseases of Children*, 140, 294.
- Finnerty, A. (2000). Taste: The tween menace- young girls, sophisticated tastes; Try shopping with your daughter now. *Wall Street Journal*, New York, Oct 20, 17
- Fisher, D. (1986). *Development and structure of the body image* (Vols. 1 & 2). Hillsdale, NJ: Lawrence Erlbaum
- Francis, S.K. (1992). Effect of perceived clothing deprivation on high school students' social participation. *Clothing and Textiles Research Journal*, 10(2), 29-33.
- French, A., & Berlin, I. (1979). *Depression in children and adolescents*. New York: Human Science Press.

- Garner, D.M., & Garfinkle, P.E. (1979). The eating attitudes test: An index of the symptoms of anorexia nervosa. *Psychological Medicine*, 9, 273-279
- Garner, D.M., & Garfinkle, P.E. (1980). Sociocultural factors in the development of anorexia nervosa. *Psychological Medicine*, 10, 647-656.
- Garrity, G.M. (1976) The influence of social class and student employment on clothing buying practices of eleventh grade girls in Tallahassee, Florida. Master's Thesis, Florida State University.
- George, P.S., Stevenson, C.H., Thomason, J., & Beane, J. (1992). *The middle school and beyond*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Gold, M., & Yanof, D.S. (1985). Mothers, daughters and girlfriends. *Journal of Personal Social Psychology*, 49, 654-659.
- Graham, P. (2004). *EOA, the end of adolescence*. New York: Oxford University Press.
- Gray, S. (1977). Social aspects of body image: Perception of normalcy of weight and affect of college undergraduates. *Perceptual Reports*, 47, 483-491.
- Haley, E.G., & Hendrickson, N.J. (1974). Children's preferences for clothing and hair styles. *Home Economics Research Journal*, 2(3), 176-193.
- Hamilton, J., & Warden, J. (1966). The student's role in a high school community and his clothing behavior. *Journal of Home Economics*, 58, 789-791.
- Hamilton, L.H., Brooks-Gunn, J. & Warren, M.P. (1985). Sociocultural influences on eating disorders in female professional dancers. *International Journal of Eating Disorders*, 4, 465-477.

- Heinberg, L.J., & Thompson, J.K. (1995). Body image and televised images of thinness and attractiveness: A controlled laboratory investigation. *Journal of Social and Clinical Psychology, 14* (4), 325-338.
- Hill, A.J., & Franklin, J.A. (1998). Mothers, daughters and dieting: Investigating the transmission of weight control. *British Journal of Clinical Psychology, 37*, 3-13.
- Horn, M.J. & Gurel, L.M. (1981). *The second skin, 3<sup>rd</sup> Edn.* Boston MA: Houghton Mifflin Company.
- Hoult, T.F. (1954). Experimental measurement of clothing as a factor in some social ratings of selected American Men. *American Sociological Review, 19*, 324-328.
- Hudson, W.W. (1982). *The Clinical Measurement Package: A Field Manual.* The Dorsey Press, Illinois.
- Huon, G. F. (1994). Dieting, binge eating, and some of their correlates among secondary school girls. *International Journal of Eating Disorders, 15*, 159-164.
- Humphrey, C., Klaasen, M., & Creekmore, A.M. (1971). Clothing and self-concept of adolescents. *Home Economics Research Journal, 63*, 246-250.
- Hurlock, E. (1955). *Adolescent Development.* New York: McGraw-Hill
- Hutchinson, M. (1982). Transforming body image. *Women Ther, 1*, 59-67
- Jung, J., Lennon, S.J., & Rudd, N.A. (2001). Self-schema or self-discrepancy? Which best explains body image? *Clothing and Textiles Research Journal, 19*(4), 171-184.
- Jones, D.C., Vigfusdottir, T.H., & Lee, Y. (2004). Body image and the appearance culture among adolescent girls and boys: An examination of friend conversations, peer criticism, appearance magazines, and the internalization of appearance

- ideals. *Journal of Adolescent Research*, 19(3), 323-339.
- Kaiser, S.B. (1983-1984). Toward a contextual social psychology of clothing: A synthesis of symbolic interactionist and cognitive theoretical perspectives. *Clothing and Textiles Research Journal*, 2 (1), 1-9.
- Kaiser, S.B. (1997). *The social psychology of clothing: Symbolic appearance in context* 2<sup>nd</sup>. New York: Fairchild Publications
- Kelly, E.A., & Eicher, J. (1970). A longitudinal analysis of popularity, group membership, and dress. *Journal of Home Economics*, 62(4), 246-250.
- Kelly, E.A., Good, E., & Walter, S. (1974). Working class adolescents' perception of the role of clothing in occupational life. *Adolescence*, 9, 185-198.
- Kelly, E.A., Daigle, C.W., LaFleur, R.S., & Wilson, L.J. (1974). Adolescent dress and social participation. *Home Economics Research Journal*, 2, 167-175.
- Kernan, J. (1973). Her mother's daughter? The case of clothing and cosmetic fashions. *Adolescence*, 8, 343-350.
- Kness, D.M. (1973). *Clothing deprivation-satisfaction: The development and validation of an instrument with three ethnic groups*. Unpublished doctoral dissertation, Pennsylvania State University.
- Kness, D.M. (1983). Clothing deprivation feelings of three adolescent ethnic groups. *Adolescence*, 18, 659-674.
- Lapitsky, M. (1961). Clothing values and their relation to general values and to social security and insecurity. Unpublished Dissertation, Pennsylvania State University.
- Lawrence, C.M. (1991). *Dieting, body image and self-concept: Their relationship in young children*. Unpublished master's thesis, University of Missouri, Columbia.

- Lennon, S.J., & Rudd, N.A. (1994). Linkages between attitudes toward gender roles, body satisfaction, self-esteem, and appearance-management behaviors in women. *Family and Consumer Sciences Research Journal*, 23, 94-117.
- Lennon, S.J., Rudd, N.A., Sloan, B., & Kim, J.S. (1999). Attitudes toward gender roles, self-esteem, and body image: Application of a model. *Clothing and Textiles Research Journal*, 17(4), 191-202.
- Levine, M. P., Smolak, L., & Hayden, H. (1994). The relation of sociocultural factors to eating attitudes and behaviors among middle school girls. *Journal of Early Adolescence*, 14(4), 471-490.
- Littrell, M.B., & Eicher, J.B. (1973). Clothing opinions and the social acceptance process among adolescents. *Adolescence*, 8, 198-212.
- Majka, O.K.P. (1977). *Clothing buying practices of two selected groups of rural high school girls*. Unpublished Master's thesis, Texas Woman's University.
- Maloney, M. J., McGuire, J., Daniels, S. R., & Specker, B. (1989). Dieting behavior and eating attitudes in children. *Pediatrics*, 84, 482-489.
- Massara and Stunkard (1979). A method of quantifying cultural ideals of beauty and the obese. *International Journal of Obese*, 3, 140-152.
- Mathes, W.W., & Kahn, A. (1975). Physical attractiveness, happiness, neuroticism, and self-esteem. *Journal of Psychology*, 90, 27-30.
- Maude, D., Wertheim, E. H., Paxton, S., Gibbons, K., & Smukler, G. (1993). Body dissatisfaction, weight-loss behaviors, and bulimic tendencies in Australian adolescents with an estimate of data representativeness. *Aust. Psychol.* 28, 128-132.

- May, J.K. (1982). Clothing practices of Oregon 4-H Youth : purchase, daily selection, and care. Unpublished Masters' thesis, Oregon State University.
- May, J.K., & Koester, A.W. (1985). Clothing purchase practices of adolescents. *Home Economics Research Journal*, 13(3), 226-236.
- McCabe, M.P., & Ricciardelli, L.A. (2001). Body image and body change techniques among young adolescents boys. *European Eating Disorders Review*, 9(5), 335-347.
- McGuire, W.J., & McGuire, C.V. (1982). Significant others in the self-space. In Suls, J (ed.), *Psychological Perspectives of the self* (Vol. 1). Hillsdale, NJ: Lawrence Erlbaum.
- McGuire, W.J., & McGuire, C.V. (1987). Development trends and gender differences in the subjective experience of the self. In Honess, T., and Yardley, K. (eds.), *Self and identity, perspective across the lifespan*. New York: Routledge & Kegan Paul
- Mendelson, B. K., & White, D.R. (1982). Relation between body esteem and self esteem of obese and normal children. *Perceptual and Motor Skills*, 54, 899-905.
- Moschis, G.P., Moore, R.L., & Stephens, L.F. (1977). Purchasing patterns of adolescent consumers. *Journal of Retailing*, 53(1), 17-26.
- Mueller, W.H., Joos, S.K., & Schull, V.J. (1985). Alternative measurements of obesity: Accuracy of body silhouettes and reported weights and heights in a Mexican American sample. *International Journal of Obesity*, 9, 193-200.
- Nichter, M., & Nichter, M (1991). Hype and weight. *Medical Anthropology*, 13, 249-284.

- Öberg, P., & Tornstam, L. (1999). Body images among men and women of different ages. *Ageing and Society, 19*, 629-644.
- Offer, D., Ostrov, E., & Howard, K.I. (1982). Family perceptions of adolescent self-image. *Journal of Youth Adolescence, 11*, 281-291.
- Ogletree, S.M., Williams, W.W., Raffeld, P., Mason, B., & Fricke, K. (1990). Female attractiveness and eating disorders: Do children's television commercials play a role? *Sex Roles, 22*, 791-797.
- O'Grady, K.E. (1989). Physical attractiveness, need for approval, social self esteem, and maladjustment. *Journal of Social and Clinical Psychology, 8*(1), 62-69.
- Parker, G., Tupling, H., & Brown, L.B. (1979). A parental bonding instrument. *British Medical Psychology, 52*, 1-10.
- Paxton, S. J., Wertheim, E. H., Gibbons, K., Szmukler, G. I., Hillier, L., & Petrovich, J. L. (1991). Body image satisfaction, dieting beliefs and weight-loss behaviors in adolescent girls and boys. *Journal of Youth and Adolescence, 20*, 361-379.
- Pisut, G.R. (1998). *Mass customization: Profiling consumer interest*. Unpublished Master's thesis, Auburn University, Alabama.
- Relationship of clothing to the personal and social acceptability of adolescents.* (1972)  
Washington Agricultural Experiment Station Bulletin 750, 1-16
- Roach, M. (1960). The influence of social class on clothing practices and orientation. University Microfilms International. Ann Arbor, Michigan, U.S.A.
- Rosenbaum, M. (1979). The changing body image of the adolescent girl. In M. Sugar (Ed.), *Female adolescent development*. New York: Brunner/Mazel.

- Rosenberg, M. (1965). *Society and the adolescent self- image*. Princeton, NJ: Princeton University
- Rucker, C.E., & Cash, T.F. (1992). Body images, body size perceptions, and eating behaviors among African-American and White college women. *International Journal of Eating Disorders*, 12, 291-299.
- Rutter, M., Izard, C.E., & Read, P.B. (Eds.). (1986). *Depression in young people: Clinical and developmental perspectives*. New York: Guilford Press.
- Ryan, M.S. (1966). *Clothing: A study in human behavior*. New York: Holt, Rinehart and Winston.
- Sault, N, (ed) (1994). *Many mirrors: Body image and social relations*. New Brunswick NJ: Rutgers University Press
- Schilder, P. (1935). *The image and appearance of the human body*. London: Kegan, Paul, Trench & Truber.
- Schlater, J.D. (1970). *National goals and guidelines for research in home economics*. Unpublished Dissertation, Michigan State University.
- Schultz, J.B. (1989). AHEA's survey of American teens. *Journal of Home Economics*, 81(2), 27-38.
- Siegel, O. (1982). Personality development in adolescence. In Wolman, B. (Ed.), *Handbook of development psychology*. Englewood Cliffs, NJ: Prentice-Hall
- Silverstein, B., & Perdue, L. (1988). The relationship between role concerns, preferences for slimness, and symptoms of eating problems among college women, *Sex Roles*, 18, 101-106



- Simpson, L.D. (1994). *Adolescents' catalog purchasing patterns for clothing*.  
Unpublished Masters's thesis, Eastern Illinois University.
- Smathers, D.G., & Horridge, P.E. (1978-79). The effects of physical changes on clothing preferences of elderly women. *International Journal of Aging & Human Development, 9*(3), 273-278.
- Smith, M.P.B. (1972). *A comparative study of rural and urban senior high school girls' clothing decisions related to selected personality factors*. Unpublished Master's thesis, Texas Tech University.
- Smith, J. (2002). Retailers start to cater to "Tween" market of 6-to- 14-year olds. *Knight Ridder Tribune Business News*, Oct 25.
- Smolak, L., & Murnen, S.K., (2001). Gender and eating problems. In R. Striegel-Moore & L. Smolak (Eds.), *Eating disorders: New directions for research and practice* (pp. 91-110). Washington, DC: American Psychological Association.
- Smucker, B., & Creekmore, A.M. (1972). Adolescents' clothing conformity, awareness and peer acceptance. *Home Economics Research Journal, 1*, 92-97.
- Special youth demographic series: The U.S. kids, tweens & teens markets (2005). The infoshop.com Retrieved Jan 26, 2005, from [http://www.the-infoshop.com/study/pf12140\\_youth\\_demographic.html](http://www.the-infoshop.com/study/pf12140_youth_demographic.html)
- Spending it all on the Kids, (2003, July 14). *Time Magazine*
- Staffieri, J.R. (1967). A study of social stereotype of body image in children. *Journal of Personality and Social Psychology, 7*(1), 101-104.

- Stephens, D.L., Hill, R.P., & Hanson, C. (1994). The beauty myth and female consumers: The controversial role of advertising. *The Journal of Consumer Affairs*, 28, 137-153.
- Strauman, T.J., & Glenberg, A.M. (1994). Self-concept and body image disturbance: which self-beliefs predict body size overestimation?. *Cognitive Therapy and Research*, 1(2), 105-125.
- Stunkard, A.J., Sorenson, T., & Schulsinger, F. (1983). Use of the Danish adoption register for the study of obesity and thinness. In S. Kety (Ed.), *The genetics of neurological and psychiatric disorders* (pp. 115-120). New York: Raven Press.
- Teen survey. (1975a). Part I, Young women's attitudes. *Clothes*, 10 (July 1), 23-32.
- Teen survey. (1975b). Part II, Young women's buying patterns. *Clothes*, 10 (July 15), 23-27.
- Thelen, M.H. & Cormier, J.F. (1995). Desire to be thinner and weight control among children and their parents. *Behavior Therapy*, 26, 85-99.
- Thelen, M.H., Powell, A.L., Lawrence, C., & Kuhnert, M.E. (1992). Eating and body image concerns among children. *Journal of Clinical Child Psychology*, 21, 41-46.
- Thomsen, S.R. (2002). Health and beauty magazine reading and body shape concerns among a group of college women. *Journalism and Mass Communication Quarterly*, 79 (4), 988-1007.
- Tween Intelligence. (2003). *Trend Central*, June 23.
- Tweens take over: Y generation is the wunderkind of brand marketing. (2003). *TD Monthly* (June, 2003). Retrieved from May 31, 2004

[http://www.toydirectory.com/monthly/june2003/Tweens\\_Generations.asp](http://www.toydirectory.com/monthly/june2003/Tweens_Generations.asp)

- Usmiani, S., & Daniluk, J. (1997). Mothers and their adolescent daughters: relationship between self-esteem, gender role identity, and body image. *Journal of Youth and Adolescence*, 26(1), 45-62.
- Vincent, M. A., & McCabe, M.P. (2000). Gender differences among adolescents in family, and peer influences on body dissatisfaction, weight loss, and binge eating behaviors. *Journal of Youth and Adolescence*, 29(2), 205-221.
- Wardle, J., and Marsland, L. (1990). Adolescent concerns about weight and eating: A social developmental perspective. *Journal of Psychosom. Res*, 34, 377-391.
- Weller, E.B., & Weller, R.A. (Eds.). (1984). *Current perspectives on major depressive disorders in children*. Washington, D.C. : American Psychiatric Press.
- Whitaker, R. (2004). Predicting preschooler obesity at birth: the role of maternal obesity in early pregnancy. *Pediatrics*, 114(1), 29-36.
- Williamson, D.A., Davis, C.J., Goreczny, A.J., & Blouin, D.C. (1989). Body image disturbances in Bulimia Nervosa: Influences of actual body size. *Journal of Abnormal Psychology*, 98(1), 97-99.
- Wilson, L.J. (1971). *Clothing awareness and feelings of clothing satisfaction and /or deprivation of a selected group of five-year old children*. Unpublished Master's thesis. Louisiana Tech University
- Wilson, D.B., Sargent, R., & Dias, J. (1994). Racial differences in selection of ideal body size by adolescent females. *Obesity Research*, 2(1), 38-43.
- Young, R.D., & Avdzej, A. (1979). The effects of obedience/ disobedience and obese/

nonobese body type on social acceptance by peers. *The Journal of Genetic Psychology, 134*, 43-49.

Youniss, J., & Smollar, J. (1985). *Adolescent relations with mothers, fathers, and friends*. Chicago: University of Chicago Press

## APPENDICES

APPENDIX A  
MOTHERS' QUESTIONNAIRE

**PART 1: YOUR DAUGHTERS CLOTHES**

Here is a list of types of stores. *Circle the answer for how often you and your daughter buy her clothes at each type.*

How often do your daughter=s clothes come from specialized clothing stores like Limited 2, the Gap, Abercrombie, Express, Old Navy, American Eagle, Limited, Abercrombie & Fitch, G & G, or Rave?

*Never Almost never Sometimes Often*

How often do your daughter=s clothes come from department stores like J. C. Penney, Belk=s, Macy=s, Dillard=s, or Sears?

*Never Almost never Sometimes Often*

How often do your daughter=s clothes come from mass merchandise chains like Target, Walmart, K-Mart, Kohl=s, Sam=s, or Costco?

*Never Almost never Sometimes Often*

How often do your daughter=s clothes come from off-price chains like T. J. Maxx, Marshall=s, Steinmart, or Ross?

*Never Almost never Sometimes Often*

How often are your daughter=s clothes bought from catalogs?

*Never Almost never Sometimes Often*

If you buy from catalogs, please name which ones. \_\_\_\_\_

How often are your daughter=s clothes bought from a website?

*Never Almost never Sometimes Often*

If you buy from a website, please name which ones. \_\_\_\_\_

*Currently, what stores satisfy you the most when shopping for clothes for your daughter?*

*Who pays for your daughter=s clothes?*

You and/or her father *Never Almost never Sometimes Most of the time Always*

Your daughter *Never Almost never Sometimes Most of the time Always*

*When you go shopping for your daughter=s clothes, how easy do you think it is to find clothes that she likes and that fit her?*

	<i>Always hard to find</i>	<i>Sometimes hard to find</i>	<i>Sometimes easy to find</i>	<i>Always easy to find</i>
Jeans	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
Pants (except jeans)	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
Skirts	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
Tops	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>

Dresses                    1                    2                    3                    4

Your daughter might think about lots of things when she is getting dressed to go somewhere. *Circle the answer that best describes how often you believe she thinks about the following things when she decides what to wear.*

Clothes that look best on her	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes like those that her friends will be wearing	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes that are comfortable	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes that are her favorite color	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes that are the newest fashion	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes with a popular brand name	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes that fit her well	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>

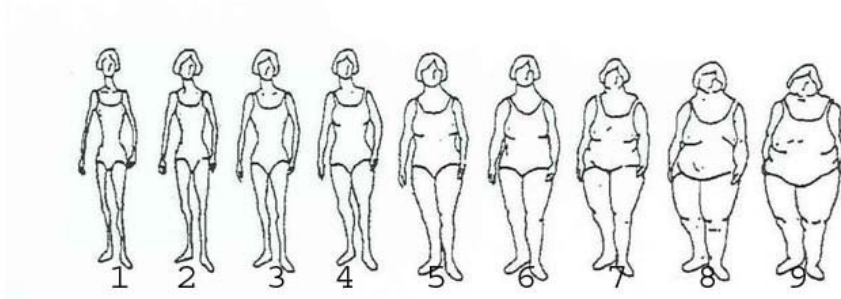
**PART 2: YOUR DAUGHTERS DEVELOPMENT**

Different things make different people think someone is attractive. We would like to know your opinion of what makes girls your daughter=s age attractive. *Circle a number from 1 to 5 that shows how important you think each of the following is in determining whether a girl your daughter=s age looks attractive. 1 means you do not think that it is at all important; 5 means that you think it is very important.*

	<i>Not at all Important</i>		<i>Moderately Important</i>		<i>Very Important</i>
Clothes	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Make-up	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Hair	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Being slender	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Nails	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Curvy body	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Looking Afit@	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Nice smile	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Not being fat	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Jewelry	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Good, clear skin	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Other_____	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Other_____	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>



Here are 9 drawings of female figures. *Please answer two questions about your daughter.*



Which drawing looks most like your daughter's figure? DRAWING # \_\_\_\_\_

Which drawing is the best figure for girls your daughter's age to have? DRAWING # \_\_\_\_\_

Your daughter is growing and changing all of the time. *Circle the descriptions that best fit what you feel about her development right now.*

How happy are you with your daughter=s height?

*Not at all happy      Somewhat happy      Happy      Very happy*

How happy are you with your daughter=s weight?

*Not at all happy      Somewhat happy      Happy      Very happy*

How happy are you with the development of your daughter=s figure?

*Not at all happy      Somewhat happy      Happy      Very happy*

How good looking do you think your daughter is?

*Not at all good looking      Somewhat good looking      Good looking      Very good looking*

Has your daughter ever wanted to be thinner? *Yes / No*      ...to be heavier? *Yes / No*

Have you ever wanted your daughter to be thinner? *Yes / No*      ...to be heavier? *Yes / No*

Has your daughter ever tried to lose weight? *Yes / No*      ...to gain weight? *Yes / No*

Have you ever encouraged your daughter to lose weight? *Yes / No*      ...to gain weight? *Yes / No*

**PART 3: YOURSELF**

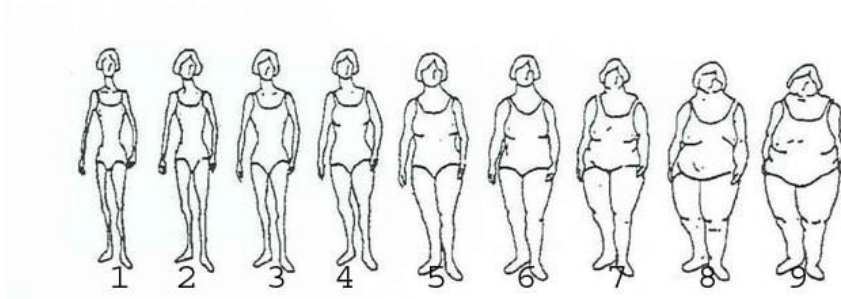
The following statements describe an individual’s potential feelings about clothes. *For each statement, circle the number (on the scale of one to five) that represents how well it describes your feelings about your clothes.*

	<i>Does Not Describe</i>			<i>Does Describe</i>	
It is very important to me to appear appropriately and fashionably dressed.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
It always gives me pleasure to buy clothes for myself.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Clothes are important to be because they represent me to others.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
I think carefully about the clothes I am buying so that I will be happy with my purchases.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
When I buy clothes, I feel confident that I am making the right choices.	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

Here is a list of magazines that some women read. *For each of the magazines listed below, circle whether you read it regularly, glance through it sometimes, or never read it.*

Harper=s Bazaar	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
Elle	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
Essence	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
In Style	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
Marie Claire	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
Vogue	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
W	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
Other (please list)			
_____	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
_____	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
_____	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>

Here are 9 drawings of female figures. *Please answer two questions about yourself.*



Which drawing looks most like your own figure?      DRAWING # \_\_\_\_\_

Which drawing do you most want to look like?      DRAWING # \_\_\_\_\_

*Circle the descriptions that best fit your image of yourself.*

I think I am

*Very Underweight*      *Somewhat Underweight*      *Normal Weight*      *Somewhat Overweight*      *Very Overweight*

From looking at me, most other people would think I am:

*Very Underweight*      *Somewhat Underweight*      *Normal Weight*      *Somewhat Overweight*      *Very Overweight*

*Use this 1 to 5 scale to indicate how dissatisfied or satisfied you are with each of the following areas or aspects of your body:*

	<i>Very Dissatisfied</i>	<i>Mostly Dissatisfied</i>	<i>Neither Satisfied Nor Dissatisfied</i>	<i>Mostly Satisfied</i>	<i>Very Satisfied</i>
Face (facial features, complexion)	1	2	3	4	5
Hair (color, thickness, texture)	1	2	3	4	5
Lower torso (buttocks, hips, thighs, legs)	1	2	3	4	5
Upper torso (breasts, shoulders, arms)	1	2	3	4	5
Muscle tone	1	2	3	4	5
Weight	1	2	3	4	5
Height	1	2	3	4	5
Overall appearance	1	2	3	4	5

**PART 4: DEMOGRAPHICS**

Your age \_\_\_\_\_

Your daughter=s age \_\_\_\_\_ Your daughter=s birth month \_\_\_\_\_ Your daughter=s grade in school \_\_\_\_\_

Has your daughter had her first period (menstruation)? YES / NO

IF YES, please check her age at onset. \_\_\_\_\_ 9 \_\_\_\_\_ 9 2  
\_\_\_\_\_ 10 \_\_\_\_\_ 10 2  
\_\_\_\_\_ 11 \_\_\_\_\_ 11 2  
\_\_\_\_\_ 12 \_\_\_\_\_ 12 2  
\_\_\_\_\_ 13 \_\_\_\_\_ 13 2  
\_\_\_\_\_ 14 \_\_\_\_\_ 14 2

Your marital status Single \_\_\_\_\_ Married \_\_\_\_\_ Divorced \_\_\_\_\_ Widowed \_\_\_\_\_

Your daughter=s siblings None \_\_\_\_\_ Number of sisters \_\_\_\_\_ Number of brothers \_\_\_\_\_

Your daughter=s ethnicity Your ethnicity Your daughter=s father=s ethnicity  
\_\_\_\_\_ African-American \_\_\_\_\_ African-American \_\_\_\_\_ African-American  
\_\_\_\_\_ Asian \_\_\_\_\_ Asian \_\_\_\_\_ Asian  
\_\_\_\_\_ Caucasian \_\_\_\_\_ Caucasian \_\_\_\_\_ Caucasian  
\_\_\_\_\_ Hispanic \_\_\_\_\_ Hispanic \_\_\_\_\_ Hispanic  
\_\_\_\_\_ Native American \_\_\_\_\_ Native American \_\_\_\_\_ Native American

Please indicate your level of education:

\_\_\_\_\_ Grade school \_\_\_\_\_ Bachelor=s degree  
\_\_\_\_\_ Some high school, no diploma \_\_\_\_\_ Master=s degree (e.g., MBA, MS, MFA)  
\_\_\_\_\_ High school diploma/GED \_\_\_\_\_ Professional degree (e.g., MD, DDS, LLB)  
\_\_\_\_\_ Some college, no degree \_\_\_\_\_ Doctorate degree (PhD, EdD)  
\_\_\_\_\_ Associates degree

Check the category that best describes your occupation:

\_\_\_\_\_ Upper management/Proprietor/Owner  
\_\_\_\_\_ Middle management  
\_\_\_\_\_ Professional (Lawyer, Accountant, Teacher)  
\_\_\_\_\_ Sales  
\_\_\_\_\_ Service worker  
\_\_\_\_\_ Student  
\_\_\_\_\_ Homemaker  
\_\_\_\_\_ Retired  
\_\_\_\_\_ Other (please specify): \_\_\_\_\_

Your household income (Check if this is a single or dual income. \_\_\_\_\_ single \_\_\_\_\_ dual)

\_\_\_\_\_ Under \$24,999  
\_\_\_\_\_ \$25,000 to \$49,999  
\_\_\_\_\_ \$50,000 to 74,999  
\_\_\_\_\_ \$75,000 to 99,999  
\_\_\_\_\_ \$100,000 to 149,999  
\_\_\_\_\_ Over \$150,000

APPENDIX B  
DAUGHTERS' QUESTIONNAIRE

## PART 1: CHOOSING CLOTHES

Think about the times that you go shopping for clothes. Imagine standing in front of your closet and deciding what to wear to go to school, be with friends, or do other things. We would like to know about the parts of your life when you decide what to buy and what to wear.

*Circle the answer that best describes how often each of the following people go with you when you shop for clothes.*

Mother	<i>Never</i>	<i>Almost never</i>	<i>About half of the time</i>	<i>Usually</i>	<i>Always</i>
Father	<i>Never</i>	<i>Almost never</i>	<i>About half of the time</i>	<i>Usually</i>	<i>Always</i>
Sister(s)	<i>Never</i>	<i>Almost never</i>	<i>About half of the time</i>	<i>Usually</i>	<i>Always</i>
Friend(s)	<i>Never</i>	<i>Almost never</i>	<i>About half of the time</i>	<i>Usually</i>	<i>Always</i>
I shop by myself.	<i>Never</i>	<i>Almost never</i>	<i>About half of the time</i>	<i>Usually</i>	<i>Always</i>

*Circle the answer that best describes how often each of the following people help you decide what clothes to buy.*

Mother	<i>Never</i>	<i>Almost never</i>	<i>About half of the time</i>	<i>Usually</i>	<i>Always</i>
Father	<i>Never</i>	<i>Almost never</i>	<i>About half of the time</i>	<i>Usually</i>	<i>Always</i>
Sister(s)	<i>Never</i>	<i>Almost never</i>	<i>About half of the time</i>	<i>Usually</i>	<i>Always</i>
Friend(s)	<i>Never</i>	<i>Almost never</i>	<i>About half of the time</i>	<i>Usually</i>	<i>Always</i>
I decide by myself	<i>Never</i>	<i>Almost never</i>	<i>About half of the time</i>	<i>Usually</i>	<i>Always</i>

*Circle the answer that best describes how often you decide to buy clothes that are exactly like or similar to the clothes worn by other people.*

Friends	<i>Never</i>	<i>Almost never</i>	<i>Sometimes</i>	<i>Usually</i>	<i>Always</i>
Popular girls at school	<i>Never</i>	<i>Almost never</i>	<i>Sometimes</i>	<i>Usually</i>	<i>Always</i>
Celebrities	<i>Never</i>	<i>Almost never</i>	<i>Sometimes</i>	<i>Usually</i>	<i>Always</i>
Clothes pictured in magazines	<i>Never</i>	<i>Almost never</i>	<i>Sometimes</i>	<i>Usually</i>	<i>Always</i>

*Circle the answer that best describes how often you ask the following people to help you decide what clothes to wear.*

Mother	<i>Never</i>	<i>Almost never</i>	<i>Sometimes</i>	<i>Usually</i>	<i>Always</i>
Father	<i>Never</i>	<i>Almost never</i>	<i>Sometimes</i>	<i>Usually</i>	<i>Always</i>
Sister(s) or brother(s)	<i>Never</i>	<i>Almost never</i>	<i>Sometimes</i>	<i>Usually</i>	<i>Always</i>
Friend(s)	<i>Never</i>	<i>Almost never</i>	<i>Sometimes</i>	<i>Usually</i>	<i>Always</i>
I decide by myself.	<i>Never</i>	<i>Almost never</i>	<i>Sometimes</i>	<i>Usually</i>	<i>Always</i>

You might think about lots of things when you are getting dressed to go somewhere. *Circle the answer that best describes how often you think about the following things when you decide what clothes to wear.*

Clothes that look best on me	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes like those that my friends will be wearing	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes that are comfortable	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes that are my favorite color	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes that are the newest fashion	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes with a popular brand name	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes that fit me well	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>

Imagine getting dressed to go to school, to see your friends, or to go to some special event. You go to your closet and want to pick out an outfit to wear that you like, that you feel comfortable in, or that you think looks good on you. *Circle the answer that best describes how often you feel that you don't have or can't get clothes that you would choose to wear.*

Clothes for school	Do you wear a school uniform? <i>Yes No</i>				
	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Clothes for doing things with your friends (for example, going to the movies or gathering at a friend's house)	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>
Dress-up clothes (for example, for school dances or for going to a wedding)	<i>Never</i>	<i>Sometimes</i>	<i>Half of the time</i>	<i>Usually</i>	<i>Always</i>

**PART 2: FASHION**

Here is a list of magazines that some girls read. You might look at these, or you might do other things with your time. *Circle whether you read each of these regularly, glance through it sometimes, or never read it.*

COSMO girl	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
Elle girl	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
Lucky	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
Seventeen	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
Teen	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
Teen Vogue	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
YM	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
Other	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>
(please list)	<i>read it regularly</i>	<i>glance through it sometimes</i>	<i>never read it</i>

Different things make different people think someone is attractive. We would like to know your opinion. *Circle a number from 1 to 5 that shows how important you think each of the following is in determining whether a girl your age looks attractive. 1 means you do not think that it is at all important; 5 means that you think it is very important.*

	<i>Not at all Important</i>		<i>Somewhat Important</i>		<i>Very Important</i>
Clothes	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Make-up	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Hair	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Being slender	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Nails	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Curvy body	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Looking Afit@	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Nice smile	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Not being fat	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Jewelry	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Good, clear skin	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Other_____	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Other_____	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>



### PART 3: YOUR GIRL FRIENDS

Think of the girls with whom you spend time and whose friendship or opinions matter at least somewhat to you. If you don't have a lot of friends, think of the girls and groups with whom you would like to be friends. Let's call these girls your friends.

There are no right or wrong answers to the following questions. We are interested in your opinion and your sense of how things are. For each question, circle the answer that best describes your opinion.

About how many of your girl friends would like to be thinner?

None      A few      About half      Most      All

How many of your girl friends would like to be heavier?

None      A few      About half      Most      All

How many of your friends are on a diet to try to lose weight or slow down weight gain?

None      A few      About half      Most      All

How often do you and your friends talk about weight, weight loss, and dieting?

Never      Rarely      Sometimes      Often      Very often

### PART 4: YOUR FAMILY

Some of the following questions may not apply to you. For example, your father may not live with you, and you may hardly ever see him. If a question does not apply to you, check the space for *Not Applicable* next to the question. Otherwise, for each question, circle the number that you feel is true for you.

How often is your mother on a diet to lose weight?

Never      Rarely      Sometimes      Often      Very often      All the time

How concerned is your mother about whether you weigh too much or are too fat or might become too fat?

Not at all Concerned		Concerned		Very Concerned
1	2	3	4	5

How concerned is your father about whether you weigh too much or are too fat or might become too fat?

\_\_\_\_ Not Applicable

Not at all Concerned		Concerned		Very Concerned
1	2	3	4	5

How important is it to your mother that you be thin?

Not at all Important		Important		Very Important
1	2	3	4	5

How important is it to your father that you be thin? \_\_\_\_\_ Not Applicable

<i>Not at all</i>		<i>Important</i>		<i>Very</i>
<i>Important</i>				<i>Important</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

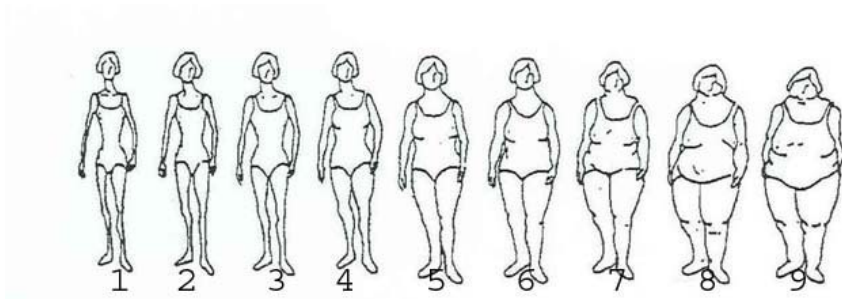
How important is it to your mother that she be as thin as possible?

<i>Not at all</i>		<i>Important</i>		<i>Very</i>
<i>Important</i>				<i>Important</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

How important is your mother=s physical appearance (shape, weight, clothing) to her?

<i>Not at all</i>		<i>Important</i>		<i>Very</i>
<i>Important</i>				<i>Important</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

Here are 9 drawings of female figures. *Please answer two questions about your mother.*



Which drawing looks most like your mother=s figure? DRAWING # \_\_\_\_\_

Which drawing is the ideal figure for adult women? DRAWING # \_\_\_\_\_

Circle the descriptions that best fit your image of your mother.

I think my mother is:

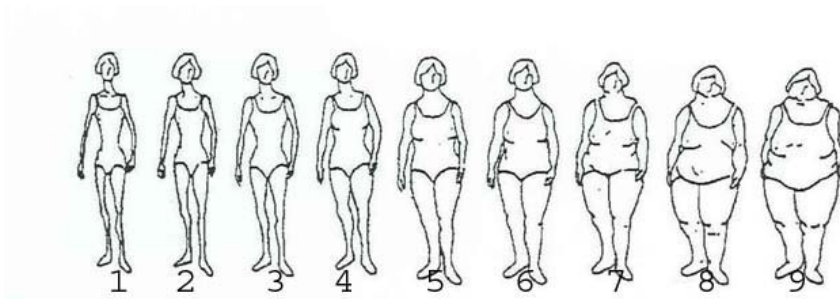
<i>Very</i>	<i>Somewhat</i>	<i>Normal</i>	<i>Somewhat</i>	<i>Very</i>
<i>Underweight</i>	<i>Underweight</i>	<i>Weight</i>	<i>Overweight</i>	<i>Overweight</i>

From looking at my mother, most other people would think she is:

<i>Very</i>	<i>Somewhat</i>	<i>Normal</i>	<i>Somewhat</i>	<i>Very</i>
<i>Underweight</i>	<i>Underweight</i>	<i>Weight</i>	<i>Overweight</i>	<i>Overweight</i>

**PART 5: YOURSELF**

Here are the 9 drawings of female figures. *Please answer two questions about yourself.*



Which drawing looks most like your own figure?                      DRAWING # \_\_\_\_\_

Which drawing do you most want to look like now?                      DRAWING # \_\_\_\_\_

You are growing and changing all of the time. *Circle the descriptions that best fit what you feel about yourself right now.*

How happy are you with your height?

*Not at all happy                      Somewhat happy                      Happy                      Very happy*

How happy are you with your weight?

*Not at all happy                      Somewhat happy                      Happy                      Very happy*

How happy are you with the development of your figure?

*Not at all happy                      Somewhat happy                      Happy                      Very happy*

How good looking do you think you are?

*Not at all good looking                      Somewhat good looking                      Good looking                      Very good looking*

Have you ever wanted to be thinner? *Yes / No*

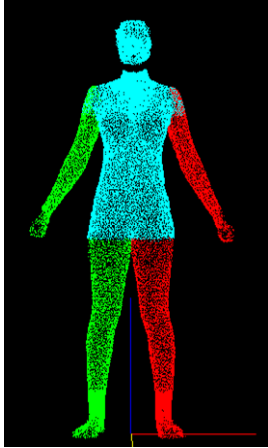
Have you ever wanted to be heavier? *Yes / No*

Have you ever tried to lose weight? *Yes / No*

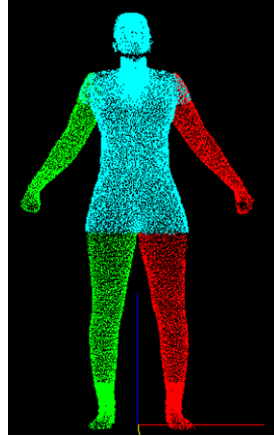
Have you ever tried to gain weight? *Yes / No*

APPENDIX C  
Body Scans

# Normal 13-Year-Old and Her Mom

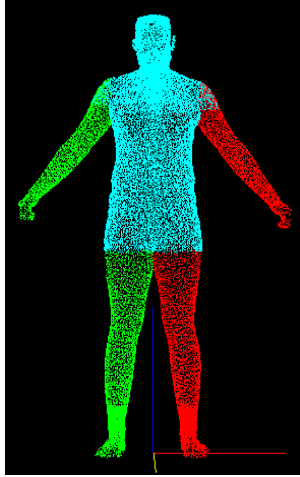


BMI 20.9

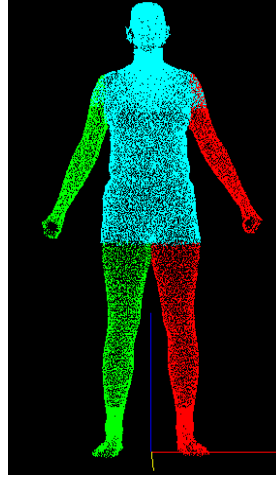


BMI 26.3

# Plus size 13-Year-Old and Her Mom

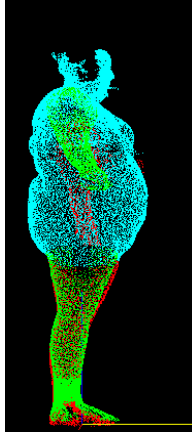


BMI 23.9

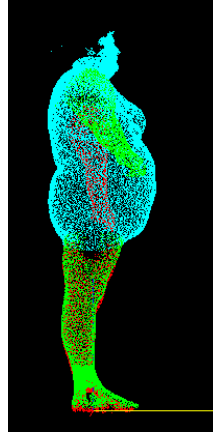


BMI 26.3

# Plus Size 14-Year Old and Her Mom



**BMI 43.3**



**BMI 42.8**