CLOTHING BEHAVIOR, BODY CATHEXIS, AND APPEARANCE MANAGEMENT OF WOMEN ENROLLED IN A COMMERCIAL WEIGHT LOSS PROGRAM

by

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(ABSTRACT)

The purpose of this study was to determine the relationship between appearance management, created appearance, body cathexis, and clothing behavior for a group of women enrolled in a commercial weight loss program. Subjects were 171 females enrolled in Weight Watchers® programs in Christiansburg, Virginia. No previous research had investigated clothing behavior, appearance management, created appearance, and body cathexis of women in a weight loss program. Because clothing is such an integral part of the self, it was important to examine the influences and contributions of this variable to weight loss.

The proposed research model hypothesized that the following variables would be related: appearance management and created appearance, created appearance and body cathexis, body cathexis and current clothing behavior, and created appearance and current clothing behavior. Other hypotheses tested the relationships between current clothing behavior and prior clothing and between demographics and the following variables: appearance management, created appearance, body cathexis, and current clothing behavior.

Results indicated that a greater percentage of weight loss was related to a higher average body cathexis score. Respondents wore clothing that emphasized body parts with which they were more satisfied, and wore clothing that did not emphasize body parts with which they were less satisfied. Results indicated that after weight loss, respondents wore clothing that would emphasize their body with more frequency and also wore clothing that would hide or camouflage their body with less frequency. Current clothing behavior also seemed to be influenced by age and marital status.

Findings from the present study provide new information about how women choose clothing based on the level of satisfaction with their bodies and where they have experienced a weight loss. The findings also provide information about the types and styles of clothing that women choose as a result of losing weight. Women in weight loss programs can use clothing to enhance their appearance and improve their body image. By increasing body satisfaction and feeling better about their bodies as they are going through the weight loss program, they may be more likely to continue with their efforts and be more successful in their weight loss.

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DEDICATION

To my parents, Tom and Barbara Allen, for their love, encouragement, and support.

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CHAPTER ONE

Introduction

Background Information

American society has seen a proliferation of fitness and weight loss centers, exercise equipment, and diet aids, possibly due to the large number of Americans who are categorized as overweight or obese (American Obesity Association, 2002). According to Grogan (1999), women, especially, exercised more in the 1990s than in the 1980s, and women constitute the majority of membership of formal diet programs in the country (Chernin, 1994). One reason for women's increased interest in dieting and exercising could be that in American society, a woman is expected to achieve a "cultural ideal of thinness" (Cash & Pruzinsky, 1990; Polivy, Garner, & Garfinkel, 1981) that is represented through visual images presented by the media.

The thin cultural ideal. The ideal for American society is a thin, attractive woman, as evidenced by images in the media. Television and the print media emphasize the physical appearance of women more than of men (Garner, Garfinkel, Schwartz, & Thompson, 1980; Silverstein, Perdue, Peterson, & Kelly, 1986). In a 1986 study, 69 percent of women and only 18 percent of men on popular TV shows were rated as being thin (Silverstein et al., 1986). While the media is not the only promoter of the thin ideal, the popularity of television, movies, and magazines leads the media to be among the most influential communicators of this ideal (Silverstein et al., 1986).

In American society, the thin cultural ideal for feminine beauty has been internalized by many women who, as a result, view their own body size and weight as excessive and unacceptable (Fallon & Rozin, 1985; Matz, Foster, Faith, & Wadden, 2002). In 1991, Naomi Wolf wrote about women's struggle to obtain this thin ideal in her book The Beauty Myth. In 2002, she noted that women were still aspiring to an "unnatural ideal body shape and weight" (p. 5) and they still feel the social pressure to be thin.

Although both genders are concerned with weight, the fear of becoming fat and an idealized pursuit of thinness are more strongly socialized in women in American culture (Polivy, et al., 1981; Rodin, Silberstein, & Striegel-Moore, 1985). Even if they are normal weight, women are twice as likely as men to view themselves as overweight (Cash & Hicks, 1990), and women tend to possess more dysfunctional body image attitudes than men (Cash, 1998). As noted by Kaplan (1980), men are acceptable in many more shapes and sizes than women, and Davis (1985) contends that women have traditionally been conditioned to perceive larger women as socially less desirable.

Appearance management. Individuals construct and interpret body images through processes of appearance management (Kaiser, 1997). Appearance is an important part of the self-concept and consequently of body image satisfaction. Interest in appearance is multifaceted and expressed partially through the amount of time, energy, and resources expended on appearance. Appearance management includes such behavior as dieting, exercising, weight training, cosmetic use, and selection of apparel to enhance one's appearance (Rudd & Lennon, 1994).

According to Cash and Hicks (1990), body image concerns are strong motivators of dieting and exercising behavior. Weight-related discontent is the most important source of negative body image. Studies have shown that overweight persons, especially women, have a more negative body image (Brodie & Slade, 1988; Cash, 1990; Cash & Green, 1986; Cash, Winstead, & Janda, 1986). Since physical attractiveness is highly valued and the media tend to focus on a young and thin body as an important factor of physical attractiveness, individuals tend to increase their exercise involvement and dieting behaviors to reach an ideal body image (Cash & Hicks, 1990). Money spent on fitness and exercise in the form of health club memberships and home exercise equipment has increased since the 1990s (Grogan, 1999). The number of dollars spent on diet foods, diet programs, and diet books nearly doubled in the 1980s – to close to $30 billion (Brownell, 1991). In the 1990s, that figure increased to $50 billion per year (Garner, 1997).

Dieting and weight loss. According to Brownell (1991), dieting is the method most widely used to improve body shape. A 1985 National Health Interview Survey indicated that 46 percent of women and 24 percent of men were dieting at the time of the survey. Fallon and Rozin (1985) reported that at the time of their survey, 67 percent of college women, but only 25 percent of college men, were dieting. A national survey conducted by the National Center for Chronic Disease Prevention and Health Promotion in 1998 indicated that while only 36.2 percent of all respondents stated they were trying to lose weight, the gender breakdown showed that 43 percent of women, but only 28.6 percent of men, stated they were trying to lose weight (1998). Garner (1997) reported that 84 percent of women in a national survey indicated that they have dieted to lose weight. While the number of individuals that are dieting at any given time may vary, it has been estimated that 95 percent of women have dieted at some point in their lives (Brownell, 1991).

The prevalence of dieting behavior among women has increased in the past 30 years. This behavior has been linked to a steady shift in the cultural definition of feminine beauty, with increasing pressure placed on women to attain thin figures (Silverstein et al., 1986). During the

last 40 years, a number of commercial weight loss programs have come into existence. These include Weight Watchers®, Jenny Craig®, Nutri-System®, Physicians Weight Loss®, and countless others. Weight Watchers®, which began in 1961, continues to have enormous popularity today. In 1994, six million women had joined Weight Watchers®. In 2001, there were over 25 million members, with over one million people attending 35,000 meetings in 30 countries each week ("Weight Watchers® works," n.d.). Chernin (1994) notes that women constitute 95 percent of the membership of formal diet programs in the country.

Use of clothing. While dieting and exercise are popular methods of changing one's body shape and body image, clothing is often the medium used to visibly project the change. Clothing can also be used to manage one's appearance while experiencing weight loss. However, weight loss programs and fitness centers usually do not focus on clothing. Clothing is an extension of the bodily self and the body scheme (Schilder, 1950) and represents the nearest aspect of one's environment. As such, it is an integral part of body image (Horn & Gurel, 1981; Kaiser, 1997) and can be used to not only change body image but to transfigure bodily appearances (Schilder 1950).

According to Markee, Carey, & Pedersen (1990), individuals might use clothing as a way to camouflage perceived figure faults or flaws and bring their bodies closer to their perceptions of the norm, thus temporarily improving body cathexis, or satisfaction with the body. They contend that clothing may create a new and better perception of the body. Cash (1990) also contends that body image may be enhanced through aesthetic self-management – by wearing favorite clothes, jewelry, cosmetics, or fragrances.

Summary

In American society, women are particularly susceptible to body dissatisfaction because of the greater importance attached to their appearance, and in particular to their thinness (Garner et al., 1980). Women are more likely to diet, seek slenderizing clothing, and to express anxiety about their weight (Rodin et al., 1985). The attainment of a more satisfying body image is a central motivation for weight loss. Weight loss, along with the use of clothing, can bring individuals' perceived body size into closer congruence with their ideal body size.

Research has demonstrated that clothing is an integral part of body image (Horn & Gurel, 1981; Kaiser, 1997) and can be used to change one's body image (Schilder, 1950). Women who engage in dieting behaviors are frequently motivated by the desire to change their body image (Cash & Hicks, 1990) and often seek help from a commercial weight loss program where women usually constitute the majority of the membership. There have been studies that

examined body image and its relationship to clothing as well as studies that examined body image among women in a weight loss program. However, there have been no studies that have examined clothing behavior, body image and appearance management of women in weight loss programs. Therefore, research regarding the relationship among clothing behavior, body image and appearance management of women in a weight loss program is warranted.

Key Concepts

The key concepts that will be used in this research are body image and body cathexis. To aid the reader in understanding the differences between these concepts as well as the relationship among these concepts, an overview of self-concept, body image, self-esteem and body cathexis is provided (see Figure 1).

Self-concept is the global perception of who one is (Kaiser, 1997, p. 147). Kalish (1975) defined self-concept as the total image one has about oneself; it contains one's actual experiences and the interpretations about those experiences. Within that total image, self-concept is multidimensional and encompasses several facets of the self.

Body image and self-esteem are considered the most important aspects of self-concept (Kalish, 1975). Self-esteem is the way we feel toward the self we perceive, an appraisal resulting from self-concept. Self-esteem refers to the way one evaluates one's self (Laurer & Handel, 1977). Body image refers to "the mental picture one has of his or her body at any given moment in time" (Kaiser, 1997, p. 98). Fallon (1990) states that one's body image includes his/her perceptions of the cultural standards, his/her perceptions of the extent to which he/she matches the standard, and the perception of the relative importance that members of society place on that match. Research has indicated that body image and self-esteem are related (Cash & Hicks, 1990; Matz et al., 2002); however, the focus of this research will be body cathexis.

Body cathexis is closely related to body image, but is the "degree of satisfaction with the body, however, rather than the image per se" (Kaiser, 1997, p. 108). Body cathexis may be considered an integral part of body image and self-concept. It is the evaluative dimension of body image and is defined as positive and negative feelings toward one's body (Jourard, 1958).

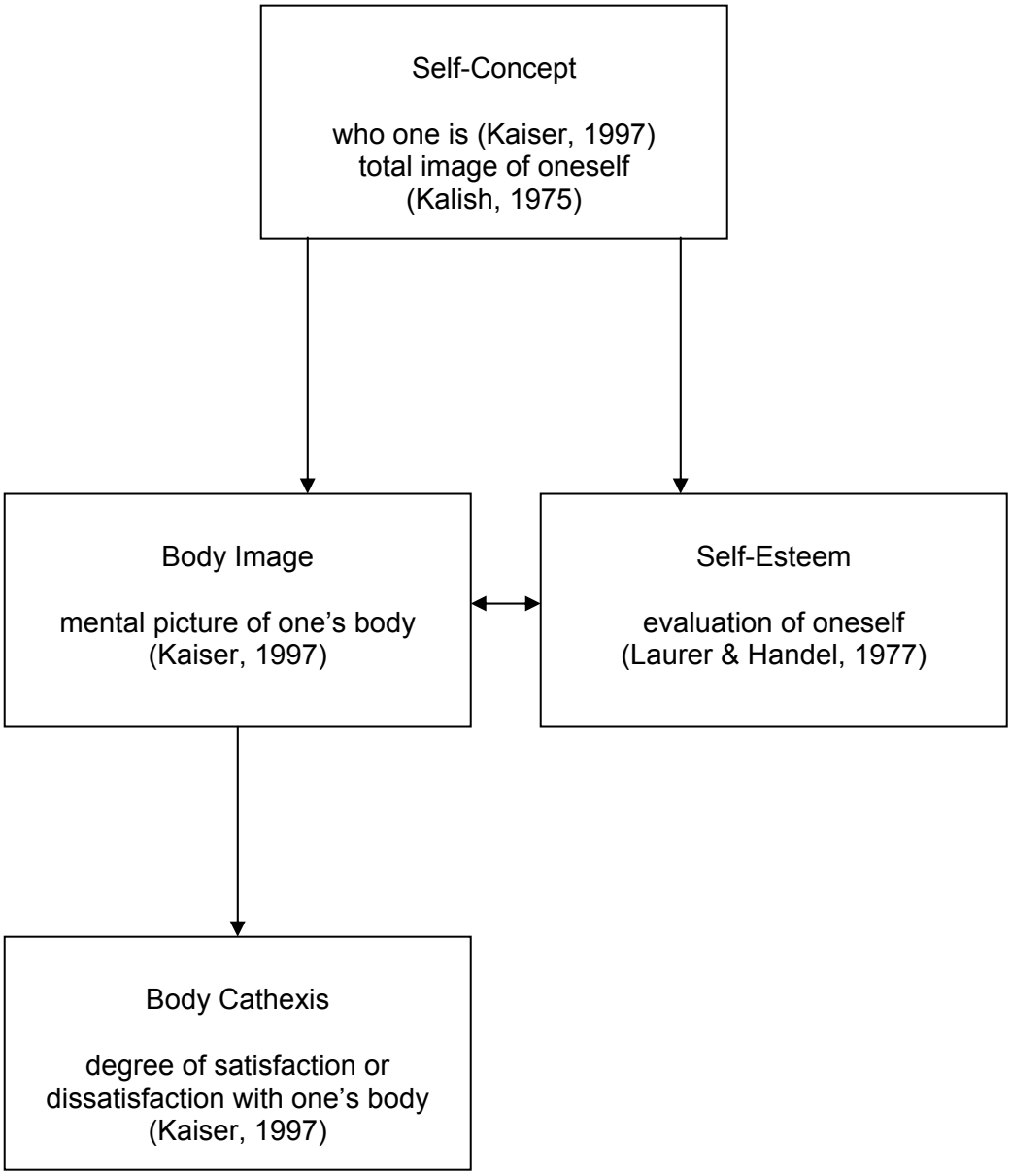

Figure 1. The relationships among key concepts.

Conceptual Framework

Social comparison theory, social identity theory, and appearance management provide the conceptual framework for the proposed study. These are discussed in the following section. Also provided is a discussion of the model that was used as a basis for designing the study.

Social comparison theory. Social comparison theory, developed by Festinger (1954), states that people have a drive to evaluate themselves. Social comparison occurs when individuals evaluate themselves in relation to others or to some standard, such as the thin image that is portrayed by the media. This comparison may result in increased or decreased feelings of self-esteem.

The extent to which individuals are satisfied with their bodies influences their feelings about themselves. This satisfaction, in turn, will affect interaction with others (Tatarka, 1995). The meanings that individuals use to define the self are shaped by interactions with others. Social comparison is a process by which individuals can distinguish themselves from others. Individuals compare themselves to others and to the ideal self, which is usually generated from cultural ideals.

Social identity theory. Cultural categories and social comparison are integral aspects of social identity theory. Social identity theory claims that: (a) people attempt to achieve and maintain a positive self-image, and (b) self-image is made up of personal and social identity. Social identity is thought to arise from group membership, and personal identity from personal achievements. It is thought that any improvement in personal or social identity will lead to an improvement in self-image (Rudd & Lennon, 1994). Women who are in a commercial weight loss program can attain an improvement in their self-image through their personal achievement in weight loss (personal identity) and through the motivation and encouragement of other members of the weight loss group (social identity).

Individuals' active creation of their appearances toward the cultural aesthetic ideal is believed to be a result of social identity (Rudd & Lennon, 1994). That is, the predominant appearance ideal of a culture becomes the aesthetic standard which individuals use to create their appearances and against which individuals compare themselves. It is through the process of social comparison that individuals continually assess the personal aesthetic value of themselves and others. Women in weight loss programs will not only compare themselves to a cultural standard, but also to other members of their weight loss program. Women who have lost weight and been successful in maintaining their loss offer a means of evaluation for other women in the weight loss program.

Appearance Management. Individuals construct and interpret images through processes of appearance management (Kaiser, 1997). Appearance is an extremely important part of the self-concept, and therefore of body image. Appearance management includes not only the process of thinking about how one looks, but also carrying out any activities pertaining to the way one looks. According to Kaiser (1997), any activities and thoughts that lead to the purchase and wearing of clothing, as well as body modification processes such as dieting and exercising, are considered part of appearance management. Rudd and Lennon (1994) note that behaviors associated with appearance management include dieting, exercising, weight training, cosmetic use, and selection of apparel to enhance one's appearance.

Women are socialized to pay more attention to appearance than men (Kaiser, 1997). Therefore, women are more aware of the manipulative potential of appearance than are men. Clothing can be used to create a favorable public image and influence the perceptions of others. By modifying the body through weight loss and changing one's appearance through the use of clothing, an individual can change the perceptions of others so that they become more favorable. More favorable evaluations by others can lead to an increased self-concept.

Appearance is one of the most prominent ways to display and reinforce self-concept. Interest in appearance is multifaceted and may reflect characteristics central to self-definition through extensive time, energy and resources expended on appearance (Kaiser, 1997). In consumer research, it is argued that the social self is achieved through the purchase and use of products that portray an image consistent with (or a compromise between) the consumer's actual and/or ideal self-concept (Sproles & Burns, 1993). Women who are dissatisfied with their body may buy and wear clothing that camouflage certain body parts or emphasize other body parts, both of which may help to bring the perceived body image more in line with the ideal body image. Dieting may also be used as a tool to help bring the perceived body image closer to the ideal.

Rudd and Lennon Model. The model developed by Rudd and Lennon (1994) proposes to "explain individual response to the cultural aesthetic ideal as it relates to appearance" (p. 164). They contend that individuals create an appearance that approximates the cultural ideal by using appearance management behaviors. The central premise of the model is the belief that individuals use the process of social comparison to continually assess the personal aesthetic value of themselves and others (see Figure 2).

The model proposes that the primary appearance ideal of any culture, especially in the United States, is internalized as the aesthetic standard individuals use to create their appearance and with which they compare their created appearances. According to the model,

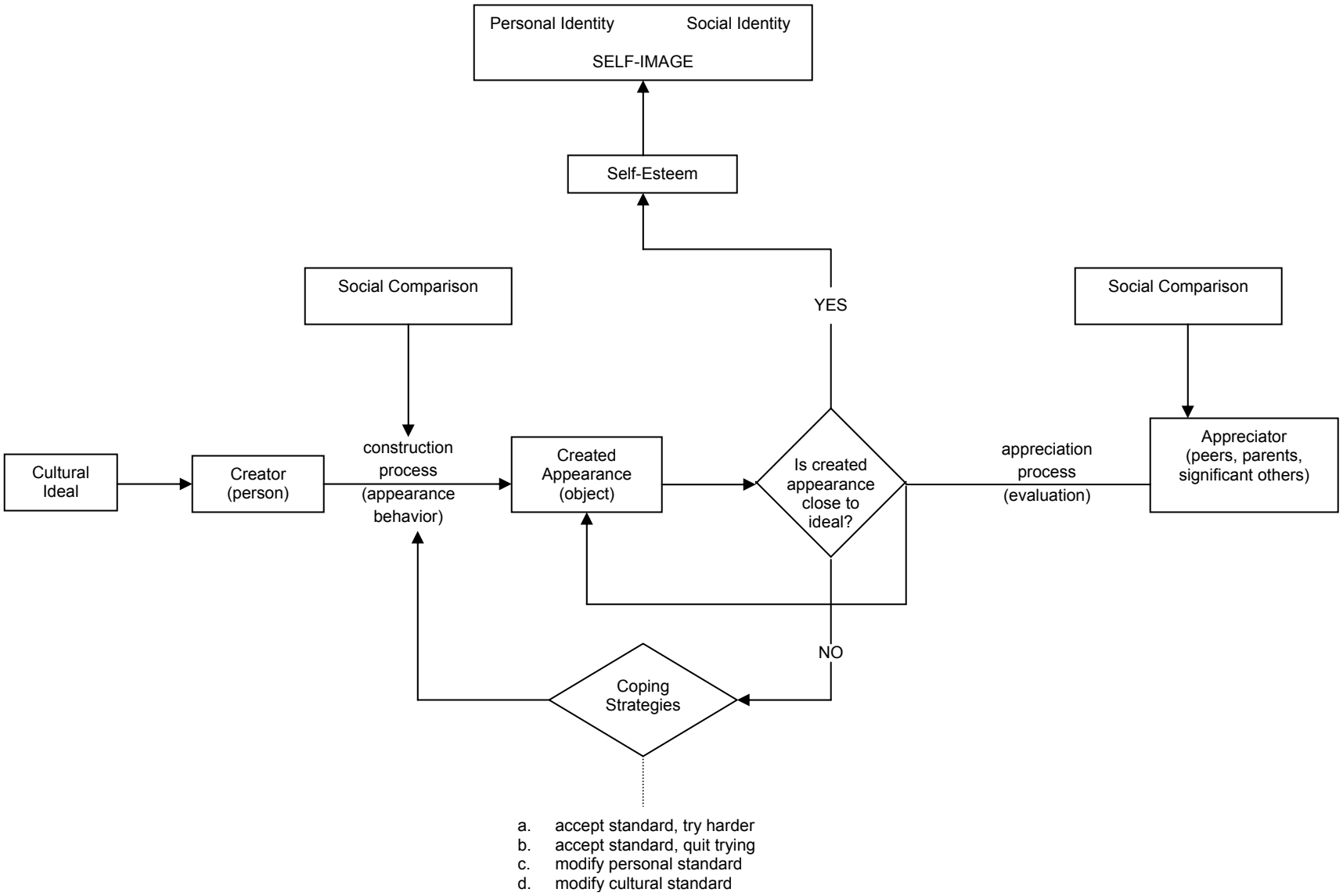

Figure 2. The effects of social comparison on the construction and evaluation of appearance (Rudd & Lennon, 1994, p. 165; reprinted by permission of the International Textile and Apparel Association; permission granted, S.S. Hutton, October 2, 2002).

individuals engage in appearance management behaviors in an attempt to create and re-create their appearances so they approximate the cultural ideal. These behaviors include dieting, exercising, weight training, cosmetic use, and the selection of apparel to enhance one's appearance. The created appearances are then evaluated either positively or negatively by the self and by others. If an individual's created appearance is perceived to be close to the cultural aesthetic ideal, then self-esteem increases. An increase in self-esteem leads to stronger personal and social identity, both of which contribute to a stronger self-image. However, if a created appearance does not come close to the cultural ideal, the individual is motivated to engage in one of several coping strategies that involve creating and re-creating one's appearance to more closely approximate the ideal. The Rudd and Lennon (1994) model has been used in several studies (Jung, Lennon, & Rudd, 2001; Lennon, Rudd, Sloan, & Kim, 1999; Rudd & Lennon, 2001; Tatarka, 1995).

Tatarka (1995) used an adaptation of the Rudd and Lennon (1994) model to investigate the relationship among body-self relations, exercise involvement, and exercise clothing attitudes for a convenience sample of 139 women in regular exercise programs. In Tatarka's model (see Figure 3), appearance management behaviors used to create an ideal appearance were measured by the time and effort involved in altering one's appearance. Time and effort were operationally defined as exercise involvement, measured by the number of hours spent each week exercising. The created appearance consisted of three exercise clothing images, varying in fit of clothing and amount of coverage. Evaluations of the created appearance affected self-concept in terms of body-self relations, specifically appearance and fitness evaluations and orientations.

Proposed Research Model

An adaptation of the Rudd and Lennon (1994) model and the model used by Tatarka (1995) is proposed for the current research (see Figure 4). An individual's created appearance is an important part of self-concept and therefore of body image. Body image concerns are strong motivators of dieting and exercising behavior (Cash & Hicks, 1990; Cash, Novy, & Grant, 1994). Accordingly, persons who enroll in commercial weight loss programs are hypothesized to have an especially negative body image and a strong investment in their appearance. As people have become more health-conscious, they have increased their dieting and exercising behavior and are spending more money on weight loss products (Brownell, 1991; Garner, 1997; Grogan, 1999).

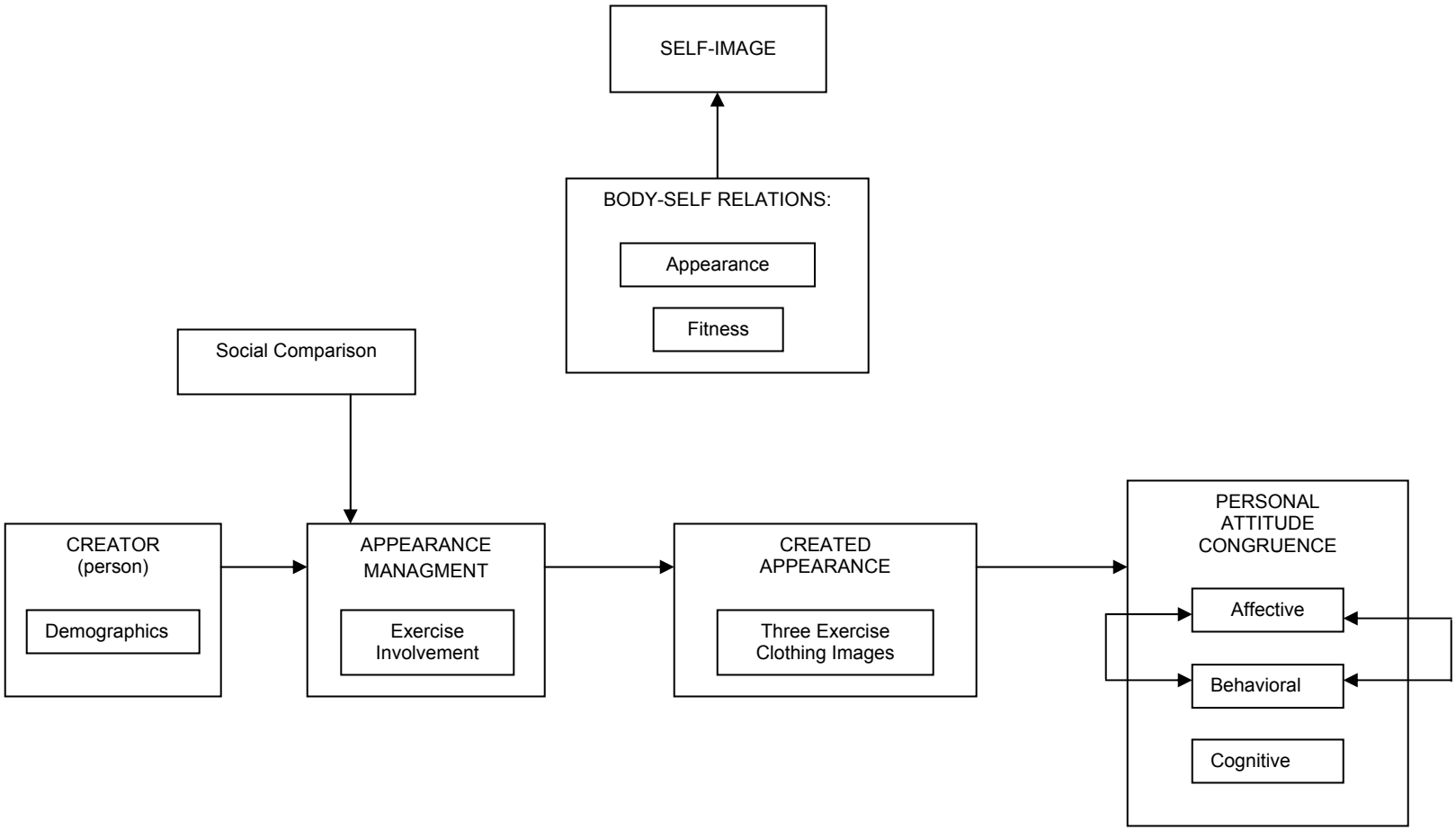

Figure 3. Social comparison on the construction of body-self relations and proposed relationships (adapated from Rudd & Lennon, 1994, p. 165) (Tatarka, 1995, p. 52); reprinted by permission of the author, September 19, 2002).

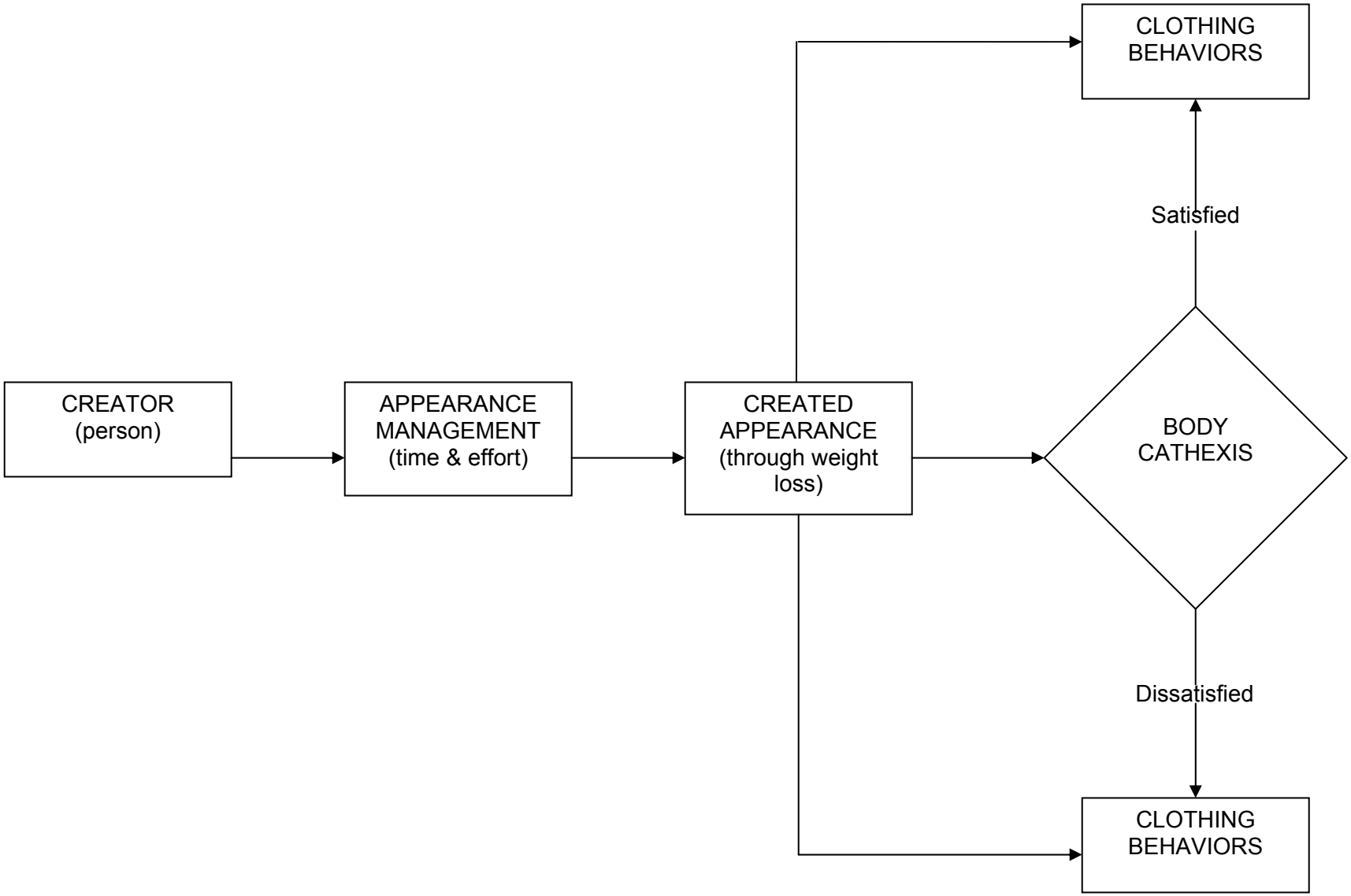

Figure 4. Proposed Research Model.

By spending time and money on dieting and exercising, women believe that they can improve their appearance and, as a result, feel better about themselves, thereby improving their self-concept. As evidenced by the increase in time and money spent on dieting and exercising behavior, appearance is an extremely important part of one's self-concept. It is believed that through personal appearance (in this case specifically through appearance management and clothing behavior), an individual presents personal identity, attitudes, moods, and value or self-worth (Stone, 1962). In the proposed model, individuals engage in appearance management behaviors in an attempt to create and re-create their appearances so they approximate the cultural ideal. In general, the time and effort involved in altering one's appearance may reflect the extent to which one strives to create an ideal appearance or wishes to approximate the cultural ideal (Tatarka, 1995). Therefore, in the current research, the time and effort involved in a weight loss program will be used as a measure of an individual's appearance management behaviors. The created appearance will be the change in appearance achieved through weight loss.

An individual's body cathexis, or degree of satisfaction with the body, is the evaluation of the appearance created through appearance management. This study will measure the degree of satisfaction with the appearance created through weight loss. An individual's body cathexis is hypothesized to affect the individual's clothing behavior. This research will investigate the relationship between body cathexis and clothing behavior to determine if a person with a higher body cathexis has a different clothing behavior than someone with a lower body cathexis. The relationship between created appearance and clothing behavior will also be investigated to determine if a person who loses weight in a particular body area exhibits clothing behavior that is different than someone who did not lose weight. This study will also investigate the difference between current clothing behavior and clothing behavior prior to weight loss.

Definitions

For the purpose of this research, the following definitions will be used.

1. Appearance management – carrying out any activities pertaining to the way one looks (Kaiser, 1997), including dieting, exercising, weight training, cosmetic use, and selection of apparel to enhance one's appearance (Rudd & Lennon, 1994). Also the time and effort involved in altering one's appearance (Tatarka, 1995). For the purpose of this study, these appearance management behaviors will include the time and effort involved in the weight loss program, measured by the length of time in the program, whether or not an individual has stayed for meetings, and whether or not an individual has followed

the prescribed program. Whether or not an individual participates in weight reduction activities other than a weight loss program will also be ascertained.

2. Body cathexis – the evaluative dimension of body image (Jourard, 1958); the degree of feeling of satisfaction or dissatisfaction with the various parts or processes of the body (Secord & Jourard, 1953, p. 343).
3. Body dissatisfaction – a person's negative thoughts and feelings about his or her body (Grogan, 1999, p. 2).
4. Body image – refers to the mental picture one has of his or her body at any given moment in time (Kaiser, 1997, p. 98). A person's perceptions, thoughts, and feelings about his or her body (Grogan, 1999, p. 1).
5. Clothing behavior – consumer behavior related to purchasing and wearing clothing (Hwang, 1996, p. 31). This study will focus on behavior related to the wearing of clothing.
6. Current clothing behavior - clothing behavior the participants engage in at the time of the survey.
7. Created appearance – the appearance that results from engaging in appearance management behaviors (Rudd & Lennon, 1994). For this study, created appearance will be the change in appearance achieved through weight loss.
8. Prior clothing behavior - clothing behavior the participants engaged in before they joined the weight loss program and lost weight.

CHAPTER TWO
Review of Literature

The purpose of this research was to determine the relationship among appearance management, created appearance, body cathexis and clothing behavior for a group of women enrolled in a commercial weight loss program. The review of literature focuses on body image, measures of body image, body cathexis, gender differences and body image, women and body image, perceived weight and body image, weight loss and body image, clothing and body image, and clothing interest.

Body Image

Body image is an aspect of self-concept. Self-concept is the global perception of who one is (Kaiser, 1997, p. 147). Kalish (1975) defined self-concept as the total image one has about oneself; it contains one's actual experiences and the interpretations about those experiences. Within that total image, self-concept is multidimensional and encompasses several facets of the self.

Body image and self-esteem are considered the most important aspects of self-concept (Kalish, 1975). Self-esteem is the way we feel toward the self we perceive, an appraisal resulting from self-concept and refers to the way one evaluates one's self (Laurer & Handel, 1977). Body image refers to "the mental picture one has of his or her body at any given moment in time" (Kaiser, 1997, p. 98).

Schilder (1950) defined body image as "the picture of our own body which we form in our mind, that is to say, the way in which the body appears to ourselves" (p. 11). One's body image includes his/her perceptions of the cultural standards, his/her perceptions of the extent to which he/she matches the standard, and the perception of the relative importance that members of society place on that match (Fallon, 1990). A person's perceived body image may or may not accurately reflect a person's actual body size. In other words, a person may see herself as smaller or larger than she actually is. In addition, a person's body image may or may not be consistent with others' perceptions of her body. A negative body image can undermine a person's general self-concept, especially of women, just as a positive body image can enhance self-concept (Jourard & Secord, 1955).

Distorted body images occur in people with a variety of shapes and sizes (Kaiser, 1997; Rodin, 1992). Individuals can overestimate the size of their body as a whole, as well as specific body parts; however, the most common distortion is to overestimate the size of one's body.

According to Rodin (1992), these estimation errors are specific to one's own body; an individual who overestimates the size of her own body will accurately judge the body size of other people. This tendency to distort one's actual body size occurs more often among obese people, pregnant women, and individuals with an eating disorder such as anorexia nervosa or bulimia (Kaiser, 1997). Kaiser notes that body image tends to become distorted when the body changes in size or when a person focuses more on the size or shape of the body.

There are two basic ways body image disturbance may be manifested (Brodie & Slade, 1988; Garner & Garfinkel, 1981). The first form is body-size distortion and involves a perceptual disturbance in which a person seems unable to assess her size accurately. Usually an individual will overestimate her body size. The second form, often referred to as body dissatisfaction, represents an attitudinal or affective dimension in which an individual expresses concern about the body shape. An individual rates her feelings about her body or body parts, indicating the level of satisfaction or dissatisfaction.

Measures of Body Image

Research studies have used both quantitative and qualitative techniques to evaluate body image and to assess differences between estimated and actual body size. Qualitative techniques that have been used include open-ended interviews and in-depth interviews. Interviews can also be unstructured or semi-structured; semi-structured interviews are guided by a list of topic areas that the researcher wishes to discuss (Kaiser, 1997).

Several quantitative measures also exist for assessing body image. Quantitative measures include silhouette techniques, body size estimation techniques, and self-report questionnaires. The silhouette technique is a widely used quantitative measure of the degree and direction of body dissatisfaction. Using this technique, silhouettes ranging from very thin to very fat are presented to a subject, who is usually asked to choose a silhouette that represents her current body size and one that represents her ideal body size. The discrepancy between the two figures is seen as an indication of dissatisfaction with one's current appearance (Fallon & Rozin, 1985; Thompson, Penner, & Altabe, 1990). Studies that have used this technique report that women have a tendency to pick an ideal figure that is thinner than their current body size (Fallon & Rozin, 1985; Keeton, Cash, & Brown, 1990).

Measures that involve body size estimation have also been widely used (Allebeck, Hallberg, & Espmark, 1976; Askevold, 1975; Brodie, Slade, & Riley, 1991; Glucksman & Hirsch, 1969; Ruff & Barrios, 1993; Slade & Russell, 1973; Thompson & Spana, 1988). Body size estimation techniques allow individuals to estimate the size of their bodies, and give a

quantitative measure of the degree of distortion by comparing participants' actual body measurements with their estimations. Techniques involve either "part body" estimation techniques, in which only specific body parts are estimated, or "whole body" estimation techniques. Results indicate that women have a tendency to overestimate their body size, perceiving themselves to be heavier than what they actually are.

Self-report questionnaires are another way to assess body dissatisfaction (Cash et al., 1986; Davis, 1985; Mahoney & Finch, 1976; Rosen & Ross, 1968; Secord & Jourard, 1953; Shim, Kotsiopulos, & Knoll, 1991; Tucker, 1982; Wendel & Lester, 1988). Respondents are asked to indicate the degree of agreement or disagreement with statements relating to satisfaction with particular body parts or with the body as a whole. Questionnaire studies have suggested that many women are dissatisfied with their bodies, particularly their lower body. Cash et al. (1986) reported that areas of dissatisfaction included the middle and lower sections of the body – areas commonly affected by weight gain.

The Body Cathexis Scale developed by Secord and Jourard (1953) was one of the first measures of this type and is still one of the most widely used (Grogan, 1999). The scale assesses the degree of satisfaction or dissatisfaction with various parts and features of the body. Subjects evaluate body characteristics according to a five-point Likert scale ranging from 1, "strong negative," to 5, "strong positive." The underlying hypothesis is that the most tangible and visible part of the self is the physical structure. Participants indicate satisfaction with a wide variety of body parts, and the scale is scored so that each participant receives a score indicating body satisfaction. Many studies have used the Body Cathexis Scale including Rosen and Ross (1968), Mahoney and Finch (1976), Tucker (1982), Davis (1985), Wendel and Lester (1988), and Shim et al. (1991).

The original Body Cathexis Scale was comprised of 46 items, although most contemporary studies have employed a modified 40-item version to assess body attitude. Studies have indicated that women are dissatisfied with all body parts, but especially with those parts associated with the lower part of the body such as the hips, thighs, and buttocks (Grogan, 1999). Based on the Body Cathexis Scale, the Body Areas Satisfaction Scale (part of the Multidimensional Body-Self Relations Questionnaire) developed by Cash (1993) assesses satisfaction with face, hair, lower torso, midtorso, upper torso, muscle tone, weight, height, and overall appearance – each rated dissatisfied to very satisfied.

Body Cathexis

Body cathexis is closely related to body image, but is the “degree of satisfaction with the body, however, rather than the image per se” (Kaiser, 1997, p. 108). Secord and Jourard (1953), pioneers in the study of body cathexis, defined body cathexis as the “degree of feeling of satisfaction or dissatisfaction with the various parts or processes of the body” (p. 343). The purpose of their 1953 study was to develop a method for evaluating the feelings of an individual towards his or her body. A likert-type scale was designed to measure the degree of satisfaction or dissatisfaction toward various parts of the body. This test was administered to 45 male and 43 female college students along with a scale measuring self-cathexis, or satisfaction or dissatisfaction with various aspects of the self. The results indicated that body cathexis was positively related to satisfaction with the self.

Body cathexis is often related to how closely a subject's current body size matches an ideal body size. Satisfaction with selected body parts varies with the amount of deviation between an individual’s actual size and what is considered to be ideal (Jourard & Secord, 1955; Jung et al., 2001). The greater the deviation, the lower the satisfaction with the body.

The areas of greatest dissatisfaction include the hips (for women) and chest (for men). Women tend to express more concern than men when certain parts of their bodies deviate from the ideal (Berscheid, Walster, & Bohrnstedt, 1973). Women typically fail to approximate the cultural ideal, which is often narrow and can only be realistically achieved by a small percentage of women (Jung et al., 2001).

Often the ideal body type is thinner than a subject’s actual body size (Bell, Kirkpatrick, & Rinn, 1986; Davis, 1985). In a study of 91 college women, Davis found that the majority (80%) thought an ectomorphic (thin) body type was ideal. Similar results were reported by Bell et al. Subjects in Davis’ study who perceived themselves to have a more mesomorphic (muscular) or endomorphic (fatter) body type had lower body cathexis scores than subjects who perceived themselves to be thinner. Therefore, body satisfaction decreased as the subjects’ perceived body type grew larger. Cohn and Adler (1992) contend that the discrepancy between the current and ideal body size may lead to a greater self-consciousness among women, and that the desire to be thin can be attributed to the social pressures that are placed on women to be thin.

Images presented by the media often make women feel dissatisfied with their bodies and therefore women feel the need to lose weight in order to meet a cultural beauty ideal. According to the media, women should want to be thinner and more attractive. In examining men’s and women’s magazines, the number of ads and articles for dieting, exercise, and weight loss have not only increased in a 30-year time period, but the majority of them were targeted

towards women rather than men (Garner et al., 1980; Silverstein et al., 1986; Wiseman, Gray, Mosimann, & Ahrens, 1992). A study of television commercials also demonstrated an increase in the number of advertisements for dieting and weight loss products over a 20-year time period (Wiseman, Gunning, & Gray, 1993).

The body shape of women portrayed in advertisements is also thinner and less curvaceous than in the past (Arthur, 1999; Richins, 1991; Silverstein et al., 1986). Arthur notes that twenty years ago, female models weighed eight percent less than the average woman whereas today they weigh 23 percent less than the average woman. Wolf (2002) also notes that today's models are thinner than those in the eighties and nineties. Silverstein et al. (1986) contend that the media's message to women is one of body image dissatisfaction. The media is increasingly bombarding women with messages that they need to lose weight.

Gender Differences and Body Image

While both men and women can experience a negative body image, a negative body image is more detrimental to women than men (Fallon, 1990). Research has shown that women are far more likely than men to feel dissatisfied with their weight and their overall appearance, to diet, and to develop eating disorders (Berscheid et al., 1973; Cash et al., 1986; Garner, 1997; Miller, Coffman, & Linke, 1980; Silberstein, Striegel-Moore, & Rodin, 1987).

A woman is also more likely than a man to try to change her shape. Although men exhibit concern about being too thin as well as becoming fat, women tend to worry mostly about being too fat (Cash et al., 1986) and often wish to be thinner. Men, on the other hand, are just as likely to desire to be heavier (by adding muscle mass) as thinner (Cohn & Adler, 1992; Fallon & Rozin, 1985; Garner, 1997; Keeton et al., 1990; Silberstein, Striegel-Moore, Timko, & Rodin, 1988). Similar results were reported by Drewnowski and Yee (1987) and Jacobi and Cash (1994) who also reported that of the men and women who wished to lose weight, all viewed themselves as overweight and expressed dissatisfaction with their body shape, but that women were more dissatisfied with their weight than men.

A strong correlation exists between weight and body dissatisfaction (Berscheid et al., 1973; Cash et al., 1986; Garner, 1997). Women report greater dissatisfaction with their weight than men, and often indicate they want to weigh less than their current weight (Birtchnell, Dolan, & Lacey, 1987; Cash et al., 1986; Garner, 1997). In a study of undergraduate students, 70 percent of women but only 23 percent of men reported dissatisfaction with their weight (Miller et al., 1980). Women tend to be dissatisfied with not only their weight, but also with weight

sensitive areas of the body (e.g., hips, thighs, buttocks, and abdomen) (Cash et al., 1986; Charles & Kerr, 1986; Garner, 1997; McAllister & Caltabiano, 1994).

When compared to men, women have more negative body image evaluations, stronger investments in their looks, and more frequent body image dysphoria, or negative body image emotions. These findings were evident in Muth and Cash's (1997) study of 136 men and 141 women in which only 22 percent of the men reported an unfavorable overall body image compared to 40 percent of the women. The authors attributed the findings to women spending more time on appearance-related behaviors, such as grooming, dieting and exercising for appearance management and seeking cosmetic surgery.

The results of nationwide surveys conducted in 1973, 1986, and 1997 indicate that body dissatisfaction increased among both men and women during the time when the surveys were conducted (Berscheid et al., 1973; Cash et al., 1986; Garner, 1997). In 1973, 15 percent of men were dissatisfied with their overall appearance. This figure had risen to 34 percent in 1986 and 43 percent in 1997. Among women, 25 percent were dissatisfied with their overall appearance in 1973. In 1986, 38 percent were dissatisfied, and by 1997, over half (56%) of women surveyed indicated overall body dissatisfaction. Regarding weight, 35 percent of men were dissatisfied with their weight in 1973. Forty-one percent were dissatisfied in 1986 and over half (52%) were dissatisfied in 1997. Women indicated higher dissatisfaction with their weight than did men. Nearly half (48%) of women surveyed indicated dissatisfaction with their weight in 1973. By 1986, this figure had risen to 55 percent and by 1997, 66 percent of women were dissatisfied with their weight.

These three nationwide surveys demonstrated a significant gender difference in the rate of body dissatisfaction, with women's dissatisfaction much higher than that of the men (Berscheid et al., 1973; Cash et al., 1986; Garner, 1997). Similar findings were reported by Miller et al. (1980) in a study of male and female undergraduate students. The majority (91%) of the women indicated body image dissatisfaction, but only 59 percent of the men were dissatisfied. While the women were the most dissatisfied with their thighs, hips, and waists, the men desired larger arms. Hwang (1993) also reported similar results in a study of elderly men and women. Hwang found that among the elderly, men also reported greater satisfaction with their bodies than women.

Women experience greater anxiety than men about becoming fat and are more sensitive to small changes in their weight (Cash & Brown, 1989). This concern with weight gain could explain the predominance of women on current weight loss diets. The majority (89%) of women in Charles and Kerr's study reported they were concerned with their weight and 77 percent

indicated they were currently on a diet or had dieted in the past (1986). The women who dieted indicated they did so because they felt their bodies did not conform to an ideal image. However, whether or not the women were concerned with dieting, all expressed dissatisfaction with their body image.

Anxiety over weight gain is often attributed to women who are of normal weight but who tend to view themselves as too heavy. Normal-weight women, compared with normal-weight men, have more of a tendency to view themselves as overweight (Cash et al., 1986). Studies have indicated that 50-75 percent of women who are normal in weight perceive themselves to be too heavy, whereas only about 25 percent of normal weight men consider themselves overweight (Cash, 1990; Cash et al., 1986; Wooley & Wooley, 1984).

Regardless of their actual size, women who see themselves as overweight show decreased satisfaction with their bodies, reduced levels of self-esteem, and lowered psychosocial well-being, as compared with men and with women who do not consider themselves overweight (Cash & Hicks, 1990). In general, women desire changes from the waist down and wish for smallness and petiteness of body parts (except for the bust). Men are often dissatisfied with body dimensions from the waist up, desiring larger body parts (Calden, Lundy, & Schlafer, 1959). However, overall, the research seems to demonstrate that women are more dissatisfied with their current weight and consistently desire a smaller body.

Women and Body Image

Studies focusing only on women have shown that overweight women had a stronger drive for thinness and a more negative body image than normal-weight women or underweight women (Brodie & Slade, 1988; Cash, Counts, & Huffine, 1990; Cash & Green, 1986; Cash et al., 1986). Overweight women, especially, have more negative views about their appearance, fitness, and health. Normal-weight women who had previously been overweight also reported greater body dissatisfaction and regarded their bodies as fatter than normal-weight women who had never been overweight. When factors of age and weight are examined, younger women (under the age of 30) tend to be more dissatisfied with their bodies than older women (Berscheid et al., 1973; Cash et al., 1986).

A person's preoccupation with his or her weight has been related to body image dissatisfaction. College students who were preoccupied with their weight and with the possibility of being overweight were more inclined to have a lower body image and an increased fear of fatness (Cash, Wood, Phelps, & Boyd, 1991). Cash et al. (1991) found that heavier subjects reported a greater preoccupation with their weight than normal-weight subjects and reported

greater body dissatisfaction. Similar results were reported in Brodie and Slade's study of 100 women in which higher levels of body fat were associated with greater body dissatisfaction and a desire for weight control (1988). American college students report a greater concern than German students with the appearance of parts of their body and with the fear of becoming too fat or not being thin enough (Bohne, Keuthen, Wilhelm, Deckersbach, & Jenike, 2002)

While being overweight has been associated with body dissatisfaction for both men and women, women who reported greater dissatisfaction with their bodies have also reported that they felt "more fat" (Wardle & Foley, 1989). Striegel-Moore, McAvay, and Rodin (1986) also found additional factors contributed to a woman's feeling of fatness. These factors included perfectionism, perceived social pressure to be thin and comparing one's body to the bodies of other women. Women who felt fat indicated they experienced more pressures to meet high standards of thinness.

Women also tend to be more dissatisfied with areas of the middle or lower torso (Cash & Henry, 1985; Charles & Kerr, 1986; McAllister & Caltabiano, 1994; Monteath & McCabe, 1997). The areas that generated the most dissatisfaction are areas commonly associated with weight gain in women: stomach, buttocks, hips, thighs, and waist. In a study of women enrolled in weight loss programs, 80 percent reported dissatisfaction with their body shape, particularly with the stomach, hips, and thighs (McAllister & Caltabiano, 1994). A study of college women revealed that none of the women in the sample gave a positive rating to all of her body parts. Except for one body area, the bust, all of the women wished to be smaller in their body parts.

Women generally want to be thinner than their current size. Jourard and Secord (1955) attributed this to society's preoccupation with the female body and found that women tend to rate their ideal body size as smaller than their current body size. Other studies have reported similar results. The majority of women in Davis' 1985 study and in Monteath and McCabe's 1997 study expressed a desire to be smaller than their perceived actual sizes and also perceived themselves to be larger than the perceived societal ideal. While the Monteath and McCabe results indicated that the women were influenced by a societal body ideal, it was also shown that they recognized that this ideal was extreme and therefore placed their own ideal between their current body size and the societal ideal.

When race is examined as a factor in studies of women and body image, African-American women appear to be more satisfied with their body and appearance than other races. African-American women were less concerned with being overweight than Caucasian women (Cash & Henry, 1995; Lennon et al., 1999), even though African-American women weighed on average 25 pounds more than the Caucasian women (Lennon et al., 1999). Asian-American

women have also reported levels of body satisfaction similar to African-American women. Caucasian women have demonstrated higher levels of dieting behaviors (Akan & Grilo, 1995), a greater fear of fatness, and a stronger desire to be thin (Rucker & Cash, 1992) than other races. Caucasian women's ideal body size was thinner than their current size, while there was little difference between the current and ideal body size for African-American women (Rucker & Cash, 1992). A possible cause of this could be that the majority of the images of the "ideal figure" used by the media are of Caucasian women.

These studies demonstrate that women have reported a great concern with being overweight and have expressed a desire to be thinner than they are. Women rated their ideal body size as smaller than their perceived current body size, and were therefore dissatisfied with their bodies (Davis, 1985; Jourard & Secord, 1955; Monteath & McCabe, 1997). When looking at specific races, Caucasian women have reported greater body dissatisfaction than African-American women and Asian-American women (Akan & Grilo, 1995; Cash & Henry, 1995; Lennon et al., 1999; Rucker & Cash, 1992). Overall, women who considered themselves to be overweight have indicated less satisfaction with their appearance than those who considered themselves to be normal-weight.

Perceived Weight and Body Image

How people think about their weight has strong implications for their body image, eating behaviors, and self-esteem (Cash & Hicks, 1990; Markus, Hamill, & Sentis, 1987). Wooley and Wooley (1984) surveyed 33,000 women and discovered that the majority (75 %) assessed themselves as "too fat" despite the fact that only a quarter of the women were deemed overweight by standard weight tables and that another 30 percent were actually underweight. Of those that were actually underweight, 45 percent reported feeling too fat. The authors perceived what they termed a "steadily growing cultural bias" towards thinness in which a woman doesn't feel accepted by society unless she feels she's thin enough (p. 199).

Among objectively normal-weight individuals, those who self-classified themselves as overweight had a more negative body image and were more prone to binge eating and dieting than those who perceived themselves to be of normal weight (Cash et al., 1986). Subjects who thought of themselves as overweight also exhibited a poorer well-being and had a greater dissatisfaction with their appearance than those who classified themselves as normal-weight.

Cash and Hicks (1990) examined the psychological differences between "being fat versus thinking fat." Results showed that normal-weight subjects who viewed themselves as overweight had less positive body images and reported more dieting, more binge eating, and a

poorer psychological well-being. These subjects had more negative evaluations of their appearance, fitness, and health than did normal-weight subjects who viewed themselves as normal weight. Normal-weight subjects who labeled themselves as overweight also reported greater anxiety about being or becoming fat than did self-labeled normal-weight subjects. Subjects who were self-labeled as overweight had higher dissatisfaction with their bodies, and reported more negative evaluations about their physical appearance, physical fitness, and health.

The authors concluded that how people think about their weight has strong implications for their body image, eating behaviors, and self-esteem. The authors contend that believing that one is overweight (even if objectively one is not) is associated with low self-esteem, poor body image, and increased dieting. Garner (1997) also found that actual weight was not a factor in wanting to lose weight. In a nationwide survey, 40 percent of women who were objectively classified as underweight still wanted to lose weight. Similarly, McAllister and Caltabiano (1994) found that while 45 percent of the women in their study were of normal weight, 65 percent indicated they were dieting to lose weight.

Research indicates that the fear of being overweight is caused by increased social pressure to be thin. Individuals who are dissatisfied with their weight often have a decreased body image as well. Even if an individual is objectively normal weight, they may see themselves as overweight and exhibit a poor body image as a result. Often these individuals will engage in dieting and weight loss behaviors in order to change their body image.

Weight Loss and Body Image

Most individuals report a decreased body image upon entering a weight loss program (Cash, 1993). Those individuals who are successful in achieving weight loss report an increase in body image, self-esteem, and improved feelings about their appearance and health (Cash, 1993; Cash, 1994; Leon, 1976; Loftis, 1981). Weight loss has also been shown to bring an individual's perceived body size closer to their ideal body size (Cash, 1994).

Maintaining a weight loss has also been positively related to an increase in one's body image and self-esteem. Those who are successful at maintaining a weight loss (keeping the weight off for a year or more) have significant improvements in self-esteem and body image over those who are unsuccessful (Loftis, 1981).

While those who are successful at maintaining a weight loss report significant improvements in self-esteem and body image, regaining lost weight can result in negative changes in body image (Cash, 1993; Cash, 1994). During weight loss maintenance, individuals

who had lost weight and subsequently regained a small amount (usually an average of five pounds) had a significant decrease in their improved feelings about their appearance. Therefore, even small weight gains can result in a decrease in body image.

Weight loss and distorted body images. Not only do individuals tend to overestimate their body size before weight loss, they can continue to overestimate their body size after weight loss. Many individuals retain a disparaging body image even after losing a significant amount of weight. Cash (1992) calls this phenomenon “phantom fat.” Similar to the phantom limb phenomenon experienced by amputees, phantom fat occurs when a person who has lost weight retains a sense that somehow their body is still unacceptable.

Rodin (1992) tells of a young woman who was an overweight teenager. After successfully losing weight as a young adult, she still thought of herself as overweight. Only when she noticed her reflection in a store window, and thought it was someone else, did she realize how thin she really was. The woman noted, “Had I known I was looking at myself, I would have padded my reflection with baby fat” (p. 52).

Cash (1992) contends that most people who want to lose weight really want to shed the social stigma and negative body image associated with being overweight. Unfortunately, weight loss carries no guarantee that the associated body image discontent will be lost as well. Individuals whose body sizes have changed or are changing as a result of weight loss may have inaccurate or distorted body images (Kaiser, 1997). Despite considerable weight loss success, individuals may still feel too big or they may focus on body areas where less weight loss has occurred (Cash, 1992). Formerly obese individuals often exhibit a "phantom body size" phenomenon; that is, they perceive themselves as if they had lost almost no weight and report continuing to feel obese following weight loss (Glucksman & Hirsch, 1969).

Studies have shown that a negative body image persists despite losing weight. Normal weight adults who were overweight as adolescents still had body image disturbance 20 years after their initial weight loss (Stunkard & Burt, 1967). Normal-weight women who had previously been overweight also demonstrated greater body dissatisfaction and regarded their bodies as fatter than normal-weight women who had never been overweight (Cash et al., 1990). These formerly overweight women (relative to those who had never been overweight) persisted in their negative body image thoughts, feelings, and concerns about weight. The body images of the formerly overweight women were more similar to those of currently overweight women than to those of women who were never overweight. Individuals who have lost a great deal of weight retained an image of themselves as overweight – the phenomenon of phantom fat.

Research has shown that individuals often express decreased body satisfaction upon enrolling in a weight loss program. Successful weight loss can result in an increase in body image and an increase in satisfaction with one's overall appearance. However, other studies have shown that despite weight loss, an individual may still retain a negative body image.

Clothing and Body Image

An individual's body image and how one feels about herself plays an important role in clothing preferences and attitudes (Kaiser, 1997). Clothing is an extended dimension of one's bodily self (Shim et al., 1991) and can be used to change the appearance of the body (Schilder, 1950). Therefore, a change in dress could result in a change in the attitude toward the body and self (Jourard, 1958).

Clothing can reduce the discrepancy between an individual's ideal and actual body image, and can be used as a means to attain the aesthetic ideal (Jourard, 1958). Clothing can also be used to improve body image by making some characteristics of the body salient, while masking other less desirable characteristics. Hwang (1996) found that individuals with greater dissatisfaction for the lower body, torso, and weight would be more likely to seek clothing that disguised perceived figure flaws. Therefore, clothing can compensate for one's dissatisfaction with body image and can enhance self-esteem (Doss, 1990; Jourard, 1958; Sontag & Schlater, 1982).

However, since a person's body image may not always be accurate, clothing that exaggerates certain body parts may be selected instead of clothing that camouflages (Kefgen & Touchie-Specht, 1986). A person that is overweight may see himself as thin, and someone who is thin may view himself as being heavy. As a result, an overweight person may choose to wear tight, revealing clothing, and an underweight person may choose loose-fitting, baggy clothing.

In order to determine whether clothing can make a difference in body cathexis, Markee et al. (1990) investigated the difference between the perception of the nude body and the perception of the clothed body in relation to body cathexis using a modified version of the Body Cathexis Scale. Results indicated the women were significantly more satisfied with their clothed bodies than with their nude bodies. The results also revealed that clothing was not only a body covering, but that it functioned to improve body image perception. Women used clothing to camouflage areas of the body that deviated from cultural ideals, thereby improving their body image.

Women who were dissatisfied with their body or with certain parts of their body have used clothing to conceal, minimize, or de-emphasize those body parts (Ogle, 1999). In Ogle's

study, clothing was used most often to alter the appearance of the bust, waist, or hips. Participants often used loose or oversized clothing to conceal those body parts perceived to be too large (i.e., long shirts to hide stomach, hips, and/or buttocks), but participants also reported using clothing to make one body part look larger so that another would look smaller (i.e., wearing shoulder pads to make the waist look smaller). Ogle also reported behaviors associated with focusing attention on one body part to draw attention away from another (i.e., wearing scarves to draw attention to the face and away from the lower torso). Participants used colors, fabrics, and styles to minimize certain areas of the body, such as wearing black to appear thinner and choosing dresses and skirts that didn't emphasize the hips. Results showed that they also used clothing to enhance certain body parts with which they were more satisfied.

How an individual perceives her body can also affect clothing choices. The results of Kwon and Parham's 1994 study indicate that when individuals perceived themselves as fat or as gaining weight, they were most interested in the camouflage function of clothing, followed by comfort, individuality, and assurance. For weight conscious women, clothing's camouflaging function played the most important role in differentiating the two states. Consistent with Ogle's (1999) findings, women in Kwon and Parham's study tended to use clothing to camouflage areas of the body with which they were dissatisfied, thereby increasing body satisfaction.

Satisfaction with clothing and body cathexis. The satisfaction with the fit of clothing is strongly related to an individual's body cathexis. Higher body cathexis scores have been related to greater satisfaction with the fit of clothing (Hwang, 1996; Shim et al, 1991). Individuals who were more satisfied with their bodies and had a favorable attitude toward clothing were more likely to be satisfied with ready-to-wear clothing, enjoy shopping, be confident in choosing proper clothes for themselves, and be heavy purchasers of clothing (Shim et al., 1991).

Lower body cathexis scores for weight have been related to dissatisfaction with the fit of clothing at the thighs, hips, and waist (Hwang, 1996). Overweight women tend to have a lower body image and lower body cathexis scores than normal-weight women (Cash et al., 1990; Cash et al., 1986), and tend to express greater dissatisfaction with the fit of clothing. Normal-weight women, when compared to overweight women and those in a weight loss group, were more satisfied with their bodies and expressed greater satisfaction with the fit of clothing (Frederick, 1977). Women who were overweight or in a weight loss group had lower degrees of body cathexis, and women in the weight loss group expressed significantly lower clothing satisfaction than the normal-weight group. The author suggested that overweight women were in need of clothing that would enhance their self-image because of the negative feedback they receive as a result of being overweight.

Dissatisfaction with the lower body has also been related to decreased satisfaction with the fit of garments in the lower body (LaBat & DeLong, 1990). The authors contended that, when clothing does not fit, the consumer may perceive the cause as related to the body and not the clothing. Further, they believed that fit problems could result in negative feelings about the body particularly when fashion dictates a close fit in the lower body with the use of blue jeans and slim skirts. LaBat and DeLong suggested that the apparel industry's sizing systems and the sized garments themselves provide symbols of expectations for women. The ideal female body type, with slimmer hips than the average American woman, is reflected in sizing systems used by manufacturers. This in turn may influence the more stringent evaluation of fit at the lower body.

The correlation between lower body satisfaction and lower body cathexis supports a relationship between the subjects' satisfaction with fit and feelings toward personal body. LaBat and DeLong (1990) suggest that dissatisfaction is a result of trying to fit real bodies into garments that the garment industry sized according to an ideal body shape with slim hips in proportion to upper body measurements. They also suggest that a departure from stereotypical definitions of female body types could result in new sizing systems that would fit more consumers.

Many studies have indicated a relationship between clothing and body cathexis. Women with a decreased body cathexis have reported a higher dissatisfaction with the fit of clothing, especially for the lower body. Studies have also indicated that weight conscious women tend to camouflage certain body parts with clothing, thereby compensating for body dissatisfaction and improving their body image perception and appearance. Clothing is therefore an important component of one's body image and self-concept. The level of interest in clothing can determine the extent to which an individual will use clothing to change body image.

Clothing Interest

Interest in clothing can be defined as one's attitude toward clothing and its behavioral dimension. In other words, clothing interest is determined by how one spends time and money on clothing and the attention paid to clothing (Kaiser, 1997). Studies have indicated that women have a higher interest in clothing than men (Kwon, 1997; Minshall, Winakor, & Swinney, 1982). According to Kaiser, the major reason for women's higher clothing interest is that women are socialized to pay more attention to appearance than are men.

Women tend to be interested in clothing and fashion regardless of their body size or weight. Davis (1985) determined that women who classified themselves as mesomorphic

(muscular) or endomorphic (fat) tended to have lower body cathexis scores than women who classified themselves as ectomorphic (thin). However, the women who classified themselves as mesomorphic or endomorphic were just as interested in fashion and clothing as women who classified themselves as ectomorphic. Therefore, even though the mesomorphic or endomorphic women had a lowered body cathexis, they still expressed an interest in clothing and fashion. Large-size women have also expressed an interest in purchasing the latest clothing styles and have indicated they are willing to spend money to purchase quality garments (Chowdhary & Beale, 1988).

Height is also not a factor affecting clothing interest. Taller women are just as interested in clothing as petite or average-height women (Shim & Kotsiopulos, 1990). Even though average-height women had the highest scores on body cathexis and petite women expressed the most dissatisfaction with their bodies, there were no differences in fashion interest or clothing importance for the three groups.

Just as body size or height does not affect the level of clothing interest, the level of satisfaction or dissatisfaction with the body also does not appear to be an indicator of clothing interest. University women in Baggs' (1988) study who were underweight or average-weight indicated higher satisfaction with their bodies than overweight women. However, all women, regardless of weight or level of body satisfaction, exhibited clothing interest and fashion leadership qualities. This finding is consistent with Davis (1985) and Shim & Kotsiopulos (1990) who found that women were interested in clothing and fashion, regardless of body type or size.

These studies indicate that women have a higher interest in clothing than men, and that interest in clothing does not seem to be related to a woman's body size or her satisfaction with her body. Larger women are just as interested in clothing and fashion as other women. These studies demonstrate that women who are overweight can still have a high interest in clothing.

Summary

The cultural expectations of attractiveness and thinness may be more powerful for women than for men, and may strongly affect feelings of self-esteem, as well as resulting appearance management behaviors. An individual's attempt to alter his or her appearance to resemble the cultural aesthetic ideal is believed to be a result of social identity. That is, the predominant appearance ideal of a culture becomes the aesthetic standard for individuals to create their appearances and against which individuals compare themselves.

Through social comparison, one observes the standard of appearance among one's immediate reference group and learns to engage in associated appearance management

behaviors. Appearance management techniques may include the use of products or procedures to enhance one's body image. Clothing can be used as a means to attain the aesthetic ideal, as well as to improve one's body image. This can be achieved by making some characteristics of the body salient, while masking other less desirable characteristics. In addition, clothing functions can change with an individual's perception of feeling fat or thin (Kwon & Parham, 1994).

Both men and women have reported being dissatisfied with some aspect of their body (Cash, 1990). However, worries about body weight appear to be a far more common component of body dissatisfaction experienced by women than that experienced by men (Fallon & Rozin, 1985; Rodin et al., 1985). Even if they are objectively normal weight, women are twice as likely as men to regard themselves as overweight (Cash & Hicks, 1990).

Although both genders experience concerns about weight, the fear of becoming fat and an idealized pursuit of thinness is more strongly socialized in females in American culture (Polivy et al., 1981; Rodin et al., 1985). Since women are more likely to be judged on how they look, the stigmatization of overweight and obese women exceeds that of men (Czajka-Narins & Parham, 1990). While important for men, weight and body shape are central determinants of a woman's perception of her physical attractiveness. Women are more likely to diet, seek slenderizing clothing, and to express anxiety about their weight (Rodin et al., 1985).

Research has shown that body image concerns are a strong motivator of dieting (Cash & Hicks, 1990). Weight loss or gain is intimately tied to a woman's self-esteem. The thin ideal is considered to be attractive for women, and an attractive appearance is essential for success in ways that it isn't for men. If women do not conform to the cultural stereotype they are not accepted and are ostracized by society (Charles & Kerr, 1986).

Research has shown that women possess more negative body image attitudes than men (Cash, 1998; Cash & Brown, 1989; Muth & Cash, 1997). The greatest gender differences pertain to women's affect-laden concerns about their shape and weight, particularly fears about being or becoming fat, which foster widespread dieting (Cash & Hicks, 1990; Cash et al., 1986; Rodin et al., 1985; Silverstein et al., 1986). Women have been shown to possess higher body image dissatisfactions than men, especially pertaining to weight (Miller et al., 1980).

There have been studies that examined body image and its relationship to clothing as well as studies that examined body image among women in a weight loss program. However, there have been no studies that have examined clothing behavior, body image and appearance management behaviors of women in weight loss programs. Women have been shown to have a more negative body image than men (Cash, 1990; Cash & Green, 1986; Cash et al., 1986).

Clothing has been shown to be an integral part of body image (Horn & Gurel, 1981; Kaiser, 1997), and clothing can also be used to change one's body image, (Schilder, 1950). Weight conscious women seek to camouflage certain body parts, and clothing may be used to compensate for body dissatisfaction and improve body image perception (Kwon & Parham, 1994). Women who engage in dieting behaviors are often motivated by the desire to change their body image (Cash & Hicks, 1990). Women wanting to lose weight often seek help from a commercial weight loss program, and women constitute the majority of members in such programs. Therefore, research regarding the relationship between the clothing behavior, body image and appearance management of women in a weight loss program is warranted.

The purpose of this research was to determine the relationship between appearance management, created appearance, body cathexis, and clothing behavior for a group of women enrolled in a commercial weight loss program. The objectives were to measure appearance management, created appearance, body cathexis, clothing behavior and demographics for a sample of women enrolled in a commercial weight loss program and to determine the relationship between those variables.

Research findings regarding the relationships among the clothing behavior, body cathexis, and appearance management of women in weight loss programs will contribute to the base knowledge concerning women and body image. More specifically, the research can examine how clothing behavior is related to appearance management. Weight loss programs can develop brochures and programs to help potential members understand what it takes to be successful in their weight loss and the time and effort that will be involved in the process. Information can be provided on how body image is affected and what appearance management behaviors can be employed. Potential members will be able to learn what changes they can expect concerning their body image and how certain appearance behaviors can affect their body image and weight loss success.

CHAPTER THREE
Statement of the Problem

Problem Statement

The growth of the weight loss and fitness industries illustrates the importance that American society places on one's appearance. In American society, a woman is expected to achieve a "cultural ideal of thinness" that is represented through visual images presented by the media. Women are more susceptible than men to this idealized image. Overweight women and those who are unable to achieve this ideal of thinness can experience a negative body image and a negative attitude toward clothing (Shim et al., 1991). Being overweight has been related to greater body dissatisfaction and a decreased body image (Cash & Green, 1986; Cash & Hicks, 1990).

Women tend to possess greater body dissatisfaction and more negative body image attitudes than men (Cash, 1998; Cash & Brown, 1989; Miller et al., 1980; Muth & Cash, 1997). Body image concerns are often strong motivators for dieting (Cash & Hicks, 1990); consequently, a decreased body image is often reported at the beginning of a weight loss program (Cash, 1993; Cash, 1994; Leon, 1976; McAllister & Caltabiano, 1994). Successful weight loss has been positively related to an increased body image in several studies (Cash, 1993; Cash, 1994; Leon, 1976; Loftis, 1981); however, these studies did not examine clothing behavior and its possible effect on body image.

Clothing has been shown to be an integral part of body image (Horn & Gurel, 1981; Kaiser, 1997), and one's level of interest in clothing can determine the extent to which an individual will use clothing to change body image. Women have a higher interest in clothing than men (Minshall et al., 1982), and overweight women appear to have as much interest in fashion and clothing as other women (Baggs, 1988; Chowdhary & Beale, 1988; Davis, 1985; Shim & Kotsiopulos, 1990). In an attempt to lose weight and increase their body image, overweight women often engage in appearance management behaviors, such as dieting and exercising, but may differ in their clothing behavior. Research has shown that women can use clothing as a means of improving their appearance and consequently their self-esteem (Joyner, 1993; Kwon, 1997). Therefore, women who are dissatisfied with their bodies and are dieting to lose weight may use clothing to compensate for their dissatisfaction by enhancing their appearance and temporarily improving their body image.

Research on clothing satisfaction and body image has demonstrated that dissatisfaction with the fit of clothing is related to dissatisfaction with weight and a lowered body cathexis

(Frederick, 1977; Hwang, 1996). Kwon and Parham (1994) demonstrated that women tend to choose certain types of clothing to increase body satisfaction based on how "fat" or "slender" they "feel." However, their focus was not on the actual physical size of the subject. While these studies have examined clothing and body cathexis as they relate to weight, none of these studies examined the changes that take place in clothing behavior as a result of weight loss. For example, women in a weight loss program can change several clothing sizes prior to reaching their weight loss goal; as a result, choices related to clothing styles may also change during the weight loss process.

The desire to change one's body image is often the motivating factor for women who engage in dieting behavior (Cash & Hicks, 1990). Women wanting to lose weight often seek help from a commercial weight loss program, and women constitute the majority of members in such programs. There have been studies that examined body image among women in a weight loss program as well as studies that examined body image and its relationship to clothing. However, there have been no studies that have examined changes in clothing behavior, body image, and appearance management of women in weight loss programs. Because clothing is such an integral part of the self (Horn & Gurel, 1981; Kaiser, 1997), it is important to examine the influences and contributions of this variable to weight loss.

Research findings regarding the relationships among appearance management, body cathexis, and clothing behavior of women in weight loss programs will contribute to the base knowledge concerning women and their body image and clothing behavior. Weight loss programs could use this information as a tool to assist their members during the weight loss process. Most weight loss programs do not address aspects of appearance or body image. Because diet alone is not the complete answer to permanent weight loss, perhaps more success would result from using appearance as a means to a goal of weight loss, rather than as part of the goal itself. More successful and permanent weight loss may be achieved through the use of a program that assists dieters in improving other aspects of themselves besides their weight. The solution to successful and permanent weight loss may lie in how an individual feels about herself. Research has shown that most women join weight loss programs because they have a negative body image (Cash & Hicks, 1990), especially of areas of the body they consider to be too large. Because research has demonstrated that negative feelings about the self, as a result of being overweight, can affect the overall body image and feelings of satisfaction or dissatisfaction with the body, this knowledge can be employed by weight loss programs. Instead of waiting until that day in the future when an ideal size may or may not be reached, attention to aspects of appearance needs to become a part of the weight loss program. Prior research

focused on the body image of women in weight loss programs, and body image and its relationship to clothing. However, research is lacking in the area of clothing behavior and body image of women in weight loss programs. Research has demonstrated that clothing influences body image; therefore, it may be used as a tool to improve the body image of the overweight individual as she makes the transition to smaller clothing sizes. The role that clothing and body image play in the weight loss process needs to be examined. Weight loss programs could use the information garnered from such research as an educational tool that could enhance the potential success of women enrolled in commercial weight loss programs.

Purpose and Objectives

The purpose of this research was to determine the relationship among appearance management, created appearance, body cathexis, and clothing behavior for a group of women enrolled in a commercial weight loss program.

The objectives were:

1. To measure for a sample of women enrolled in a commercial weight loss program the following variables: appearance management, created appearance, body cathexis, current clothing behavior and prior clothing behavior.
2. To examine the relationships between appearance management and created appearance.
3. To examine the relationships between created appearance and body cathexis.
4. To examine the relationships between body cathexis and current clothing behavior.
5. To examine the relationships between created appearance and current clothing behavior.
6. To examine the difference between current clothing behavior and prior clothing behavior.
7. To examine the relationships between demographics and the following variables: appearance management, created appearance, body cathexis, and current clothing behavior.

Hypotheses

Figure 5 shows the research model and hypothesized relationships.

1. *Among the women enrolled in a commercial weight loss program, there will be a relationship between appearance management and created appearance.*

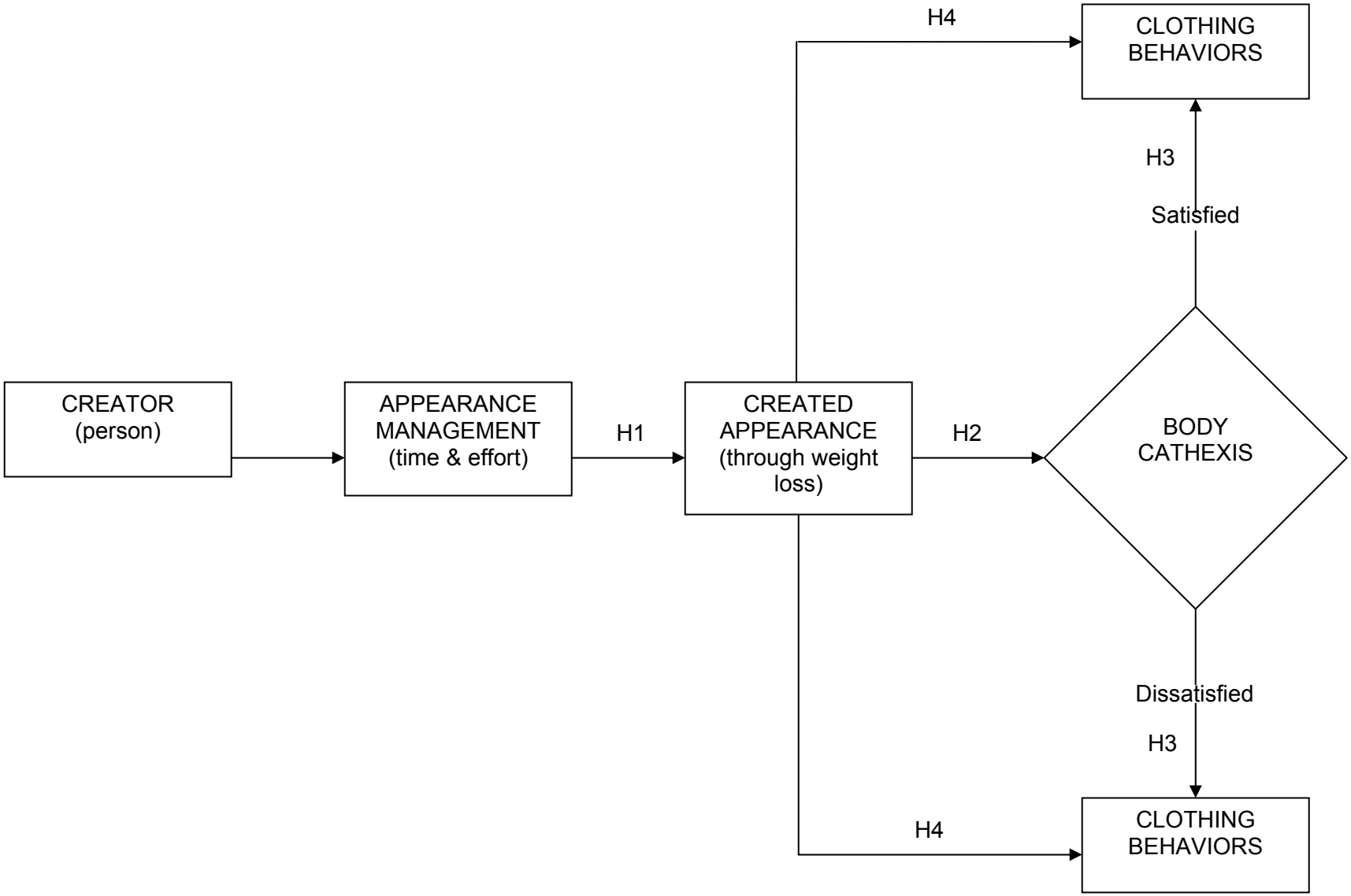

Figure 5. Research Model with Hypothesized Relationships.

1A: Among the women enrolled in a commercial weight loss program, there will be a relationship between length of time and percentage of weight loss.

1B: Among the women enrolled in a commercial weight loss program, there will be a relationship between following the weight loss program and percentage of weight loss.

1C: Among the women enrolled in a commercial weight loss program, there will be a relationship between staying for meetings and percentage of weight loss.

1D: Among the women enrolled in a commercial weight loss program, there will be a relationship between other weight loss activities and percentage of weight loss.

According to Kaiser (1997), interest in appearance is multifaceted and expressed partially through the amount of time, energy, and resources expended on appearance. Appearance management includes not only the process of thinking about how one looks, but also carrying out any activities pertaining to the way one looks. According to Kaiser, any activities and thoughts that lead to the purchase and wearing of clothing, as well as body modification processes such as dieting and exercising, are considered part of appearance management. Therefore, it is hypothesized that the time and effort expended in a weight loss program will be related to created appearance, the appearance that results from weight loss. It is further hypothesized that in this study, individuals who have been in the weight loss program for a longer length of time, have stayed for meetings, and have followed the prescribed program (stayed within the points range, drank six glasses of water every day, and eaten five fruits and vegetables every day) will report a greater percentage of weight loss (pounds lost divided by total weight loss goal). Analysis will also be performed to determine if the individuals who are the most successful in their weight loss rely only on the Weight Watchers® program or if they supplement the weight loss program with additional weight loss activities.

2. *Among the women enrolled in a commercial weight loss program, there will be a relationship between created appearance and body cathexis.*

2A: Among the women enrolled in a commercial weight loss program, there will be a relationship between percentage of weight loss and the average body cathexis score.

2B: Among the women enrolled in a commercial weight loss program, there will be a relationship between noticeable weight loss and the individual body cathexis items.

Rudd and Lennon (1994) contend that individuals create an appearance that approximates the cultural ideal using appearance management behaviors, which include dieting. The created appearances are then evaluated either positively or negatively by the self and by others. If an individual's created appearance is perceived to be close to the cultural aesthetic ideal, then self-esteem increases. According to Secord and Jourard (1953), body cathexis is positively related to satisfaction with the self. According to Cash (1990), dieting may be used as a tool to help bring the perceived body image closer to the ideal. Therefore, it is hypothesized for this study that a greater percentage of weight loss (pounds lost divided by total weight loss goal) will correspond to a higher average body cathexis score. It is further hypothesized that individuals who indicate a noticeable loss of weight in a specific body area will be more satisfied with that particular body area (have a higher body cathexis score for that particular area) than individuals who do not report a noticeable weight loss for that area. For example, individuals who report a noticeable weight loss in their hips are expected to be more satisfied with their hips than individuals who do not report a noticeable loss in that area.

3. *Among the women enrolled in a commercial weight loss program, there will be a relationship between body cathexis and current clothing behavior.*

   Clothing is an extended dimension of one's bodily self (Shim et al., 1991), and one's self-feeling toward the body plays an important role in clothing preferences and attitudes (Kaiser, 1997). Schilder (1950) stated that bodily appearances can be transfigured with the use of clothing. He further hypothesized that clothing is incorporated into body scheme and may be able to change body image. Clothing can be used to reduce the discrepancy between the ideal and actual body images of individuals. Jourard (1958) theorized that a change in dress could result in a change in the attitude toward the body and self. Clothing can be used as a means to attain the aesthetic ideal, as well as to improve one's body image. This can be achieved by making some characteristics of the body salient, while masking other less desirable characteristics. Therefore, clothing can compensate for one's dissatisfaction with body image and enhance self-esteem.

The results of a study by Markee et al. (1990) indicate that clothing is not only a body covering, but that it may function to improve body image perception. They found that individuals may use clothing to camouflage areas of the body that deviate from cultural ideals, thereby improving their body image. It is hypothesized for this study that body cathexis will be related to clothing behavior. Lower body cathexis scores will be correlated with certain clothing behaviors while higher body cathexis scores will be correlated with other clothing behaviors. For example, it is hypothesized that individuals with higher body cathexis scores will indicate they more often wear clothing that is closely fitted, and more often wear shirts that are tucked in, pants that have a waistband, and styles that expose their bodies more, such as shorter skirts and tops with shorter sleeves. It is also hypothesized that individuals with lower body cathexis scores will indicate they more often wear clothing that is more loosely fitted, with shirts that are untucked, pants that have an elastic waistband, and styles that cover their bodies more, such as longer skirts and tops with longer sleeves.

4. *Among the women enrolled in a commercial weight loss program, there will be a relationship between created appearance and current clothing behavior.*
   It is hypothesized for this study that created appearance (achieved through weight loss) will be correlated with clothing behavior. A report of a noticeable weight loss in a specific area will be correlated with certain clothing behaviors. For example, it is hypothesized that individuals who report a noticeable loss of weight for the waist will indicate they more often wear pants and skirts that have a waistband, blouses or shirts that are tucked in, and wear belts with their pants or skirts.

   Studies by Ogle (1999) and Charles and Kerr (1986) have indicated that changes in clothing behavior do occur with weight loss. Respondents reported that once they had lost weight, they no longer wore baggy clothing to hide their bodies, but instead wore more fitted clothing.

5. *Among the women enrolled in a commercial weight loss program, there will be a difference between their current clothing behavior and prior clothing behavior.*
   Ogle (1999) and Charles and Kerr (1986) found that women who had lost weight indicated that their use of clothing had changed as a result of their weight loss. They reported they no longer wore baggy clothes to hide their bodies, but instead wore more fitted clothing. It is hypothesized that an individual's current clothing behavior will differ from clothing behavior prior to weight loss.

6. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and appearance management.*

   6A: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and length of time.

   6B: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and following the weight loss program.

   6C: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and staying for the meeting.

   6D: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and other weight loss activities.

   In Tatarka's 1995 study, appearance management was measured by the level of exercise involvement. While her study did not find a relationship between demographics and appearance management, previous studies (Adame, Johnson, Cole, Matthiasson, & Abbas, 1990) did find that exercise involvement was related to age and education.

7. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and created appearance.*

   7A: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and percentage of weight loss.

   7B: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and noticeable weight loss.

   In Tatarka's 1995 study, created appearance was represented by exercise clothing images. Results indicated that clothing images were related to the level of education and the race/ethnic group of the respondents.

8. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and the body cathexis.*

   Body image has been found to be associated with demographic variables. Hamilton and Chowdhary (1989) found a relationship between education and occupation and body image. Age has also been shown to be related to body satisfaction. For example, Cash et al., (1986) found that younger subjects were more dissatisfied with

their bodies, and Hwang (1993) found that elderly subjects who had higher income, social participation status, and education were more satisfied with their bodies. Tatarka (1995) found that scores for body-self relations, an indication of body image, decreased with age and that there was a relationship between body-self relations and race. Other studies have shown that Caucasian women have reported greater body dissatisfaction than African-American women and Asian-American women (Akan & Grilo, 1995; Cash & Henry, 1995; Lennon et al., 1999; Rucker & Cash, 1992).

9. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and current clothing behavior.*
   Research has shown a relationship between certain demographics and clothing behavior. Jackson (1992) and Hwang (1993) found a relationship between age and clothing behavior, in that apparel expenditures were significantly related to income among elderly people. Previous research has also reported relationships between clothing expenditure and demographic variables of age, gender, marital status, and education (Dardis, Derrick, & Lehfeld, 1981; Norum, 1989).

Assumptions

1. The subjects understood and responded to the questionnaire accurately and honestly.
2. Major constructs such as appearance management, created appearance, body cathexis, and clothing behavior management were validly measured.

Limitations

1. Because the sample was not randomly selected, the findings cannot be generalized to the whole female population.
2. Because only one commercial weight loss program was used, the findings cannot be generalized to women enrolled in other weight loss programs.
3. This study focused on the subjects' responses and not their actual behavior.

CHAPTER FOUR
Methods

The purpose of this research was to determine the relationship between appearance management, created appearance, body cathexis, and clothing behavior for a group of women enrolled in a commercial weight loss program. Subjects were female members enrolled in a weight loss program in Southwestern Virginia. A questionnaire regarding appearance management, created appearance, body cathexis, clothing behavior, and demographics was developed and pilot tested. The results of the pilot test were used to revise the instrument before data collection. Nine hypotheses were formulated and the relationships among variables were analyzed by statistical tests including Pearson correlation coefficient, Spearman's rho, t-test, Wilcoxon's rank sum test, Wilcoxon's signed ranks test, gamma, chi-square, and one-way analysis of variance (ANOVA). Reliability of the questionnaire was analyzed using Cronbach's alpha.

Sample

The population for this study was women enrolled in a commercial weight loss program. Weight loss centers would not provide membership lists nor contact information in order to protect their members' privacy; therefore, random selection was not feasible. As a result, participants were identified using the nonprobability sampling techniques of purposive sampling and judgmental sampling. Purposive sampling is characterized by the "deliberate effort to obtain representative samples by including presumably typical areas or groups in the sample" (Kerlinger, 1973, p. 129). Judgmental sampling involves using an "expert's" judgment to identify representative samples (Aaker, Kumar, & Day, 1995). According to Aaker et al. (1995), judgmental sampling is advisable in situations where probability sampling would not be feasible or would be too expensive. Weight Watchers® meetings in the New River Valley area of Southwestern Virginia were used to obtain a representative sample for this study. The sample size was 171 participants.

Several Weight Watchers® meetings are held in the New River Valley area each week. Because the researcher was a member of Weight Watchers® and knew the leaders of the meetings, this population was chosen because of its convenience. Weight Watchers® programs were also chosen due to the availability of a large membership in the area and also because Weight Watchers® has a policy stating that anyone enrolling in the Weight Watchers® program must have at least five pounds to lose. Weight Watchers® determines a person's weight range

using guidelines set by the government according to height and age. This weight range has both an upper end and a lower end. For example, a person who is five feet five inches tall and is between the ages of 25-44 has a weight range of 120-144 pounds. A potential enrollee of the Weight Watchers® program must weigh at least five pounds above the lower end of their weight range. Therefore, using the above example, a potential enrollee must weigh at least 125 pounds in order to enroll in the program. The Weight Watchers® policy ensured that all of the individuals who enrolled in the program, and therefore all potential participants in this study, had at least five pounds to lose when they entered the Weight Watchers® program. It was expected that most potential participants would have more than five pounds to lose. It should be noted, however, that the amount of weight that individuals had lost at the time of the study would vary with how long they had been in the weight loss program. Potential participants of the study were expected to include members in varying stages of enrollment: those just entering the program, those still losing weight, and those who had already reached their weight loss goal and who were maintaining their weight.

Permission was obtained from the leaders of the Weight Watchers® meetings to distribute the questionnaire at the weekly meetings. The researcher distributed the questionnaire, along with a cover letter explaining the research, to each female member who attended the meetings. Members were able to complete the questionnaire before the meeting began and return it to a designated box, or they had the option to take the questionnaire home and return it the following week. Upon completion of the questionnaire, members were able to complete a separate form to register for a door prize drawing.

The Instrument and Variables Measured

The instrument was developed after reviewing pertinent literature and conducting a focus group with current Weight Watchers® staff members. The members of the focus group shared their experiences with losing weight, and talked about how their satisfaction or dissatisfaction with their body had changed as a result of losing weight, and also how their clothing behavior had changed as a result of losing weight. This information was used as the foundation for developing the instrument.

The instrument is included in Appendix A. The instrument consisted of a 78-item questionnaire that included items related to a subject's body cathexis, appearance management, created appearance, clothing behavior, and demographic variables. Items related to body cathexis were adapted from an existing scale, while items in the other sections were developed by the researcher. The questionnaire included a cover letter (Appendix A) that

explained the research to potential participants. The questionnaire and a statement of purpose were submitted to the Institutional Review Board at Virginia Tech prior to data collection. Approval for the study was granted by the Board (see Appendix B).

Body cathexis. Body cathexis is the evaluative dimension of body image (Jourard, 1958) and the degree of feeling of satisfaction or dissatisfaction with the various parts of the body (Secord & Jourard, 1953). Items related to body cathexis were in Section A of the instrument and included items numbered 1-16. The items asked respondents to rate the degree of satisfaction with the following body parts and features: facial features, complexion, hair, hips, thighs, buttocks, legs, waist, stomach or abdomen, bust or breasts, shoulders, arms, muscle tone, weight, height, and overall appearance. The response scale for these items included the following categories: 4=Very satisfied, 3=Satisfied, 2=Dissatisfied, and 1=Very dissatisfied. The items related to body cathexis were an adaptation of the Body Areas Satisfaction Subscale (BASS) developed by Cash (2000). The BASS has an established reliability of .73 for females as determined using Cronbach's alpha.

Appearance management. Appearance management includes behaviors in which an individual engages to improve one's appearance (Rudd & Lennon, 1994). For the purpose of this study, these behaviors were the time and effort involved in the weight loss program, measured by the length of time in the weight loss program, whether or not an individual stayed for the meetings, and whether or not an individual followed the prescribed program. Items related to appearance management were in Section B of the instrument and included items numbered 17 and 21-25. Item 17 asked respondents how long they had been Weight Watchers® members; responses were given in the form of weeks, months, and/or years. Items 21-23 corresponded to following the prescribed program. These items asked how often the respondents followed the Weight Watchers® program by doing the following: staying within their points range, drinking six glasses of water every day, and eating five fruits and vegetables every day. The answer choices for these items included the following: Always, Most of the time, Sometimes, Rarely, and Never. Item 24 asked how often respondents stayed for the meeting. The answer choices for this item included: Every week; Three times a month; Twice a month; Once a month; and Never, just weigh and leave. Item 25 asked respondents to indicate if they participated in other weight reduction activities (for example, aerobic exercise or weight-lifting) outside of Weight Watchers®. This item was used to determine if the individuals who were the most successful in their weight loss relied only on the Weight Watchers® program or if they supplemented the program with additional weight loss activities.

Created appearance. Created appearance refers to the appearance that is created through weight loss. Items related to created appearance were in Section B of the questionnaire and included items numbered 18-20. Item 18 asked what would be a realistic number of pounds for respondents to lose according to their height and age, and item 19 asked how much weight in pounds they had lost since joining Weight Watchers®. By dividing the response to item 19 by the response to item 18, the researcher was able to determine what percentage of a respondent's weight loss goal she had lost. For example, if a respondent indicated she would like to lose 60 pounds and she had already lost 15 pounds, the percentage of weight loss was 25 percent. Item 20 asked where the respondents' weight loss had been more noticeable; respondents were able to choose up to three body parts from those given. The choices were face, hips, thighs, buttocks, waist, legs, stomach or abdomen, bust or breasts, arms, no weight loss, or no noticeable weight loss.

Clothing behavior. Clothing behavior refers to consumer behavior related to the purchasing and wearing of clothing (Hwang, 1996). This study focused on behaviors related to the wearing of clothing. Items related to clothing behavior were in Section C and D of the instrument and included items numbered 26-71. Items 26-48 asked respondents to indicate their current clothing behavior by indicating if they wore certain clothing based on characteristics such as length, color, fit, etc. Items 49-71 were similar to items 26-48 except that respondents were asked to indicate their clothing behavior before they lost weight. Instructions given prior to the "before" section directed respondents to skip that particular section if they had not lost weight. Items 49-71 pertained to the same clothing behaviors as items 26-48; however, they were worded to read, "Before I lost weight, I wore…" The response scale for items 26-71 included the following categories: 5=Always, 4=Most of the time, 3=Sometimes, 2=Rarely, and 1=Never.

Demographics. Demographics included information regarding an individual's age, income, racial/ethnic group, occupation, education, marital status, and gender. Items related to demographics were in Section D of the instrument and included items numbered 72-78. The last demographic item, gender, was not used in hypothesis testing but was included in the instrument to ensure that only female respondents were included in the final sample.

Pilot Test

The questionnaire was pilot tested with seven current Weight Watchers® staff members, who were not included in the final sample. The pilot test was conducted to establish the face validity and content validity of the questionnaire. Time taken to complete the questionnaire, as

well as clarity and understanding of the items were noted. Suggestions for improvement were also solicited. Minor changes were made related to the clarity of some items. The amount of time needed to complete the questionnaire was 5-10 minutes.

The questionnaire was revised; additional questions were added and the format was changed. A second pilot test was conducted among eight Weight Watchers® staff members; four of whom had completed the first pilot test. Time taken to complete the questionnaire, as well as clarity and understanding of the terms were noted. Suggestions for improvement were also solicited. No major changes were suggested. The amount of time needed to complete the questionnaire was 5-10 minutes.

Data Collection

The data were collected using the survey method. Subjects completed the questionnaire that included items related to clothing behavior, body cathexis, appearance management, created appearance, and demographics. The leaders of the Weight Watchers® meetings gave the researcher permission to distribute the questionnaire at the weekly Weight Watchers® meetings. The researcher distributed the questionnaire, along with the cover letter explaining the research, to each female member who attended the meetings. The approximate time to complete the questionnaire was 10 minutes. Members were able to complete the questionnaire before the meeting began and return it to a designated box, or they had the option to take the questionnaire home and return it the following week. A drawing from the names of those who had registered for a door prize was held at each meeting location where questionnaires were collected.

Reliability and Validity

Cronbach's alpha coefficient was computed to test for internal consistency of the body cathexis and clothing behavior subscales of the instrument. The subscales of appearance management and created appearance were not tested because the items in each of these subscales did not ask the same type of question and therefore would not be expected to be strongly correlated. According to Nunnally (1978) internal consistency is based on the average correlation among items within a test. A scale can be considered to have good reliability if the alpha value is 0.70 or greater.

The instrument's validity was evaluated to ensure that the instrument was measuring what it was designed to measure. To establish content validity, faculty and staff members in

Clothing and Textiles, as well as current Weight Watchers® staff members, were asked to evaluate the questionnaire items against the research objectives.

Analysis of Data

The research hypotheses were tested using statistical tests including Pearson correlation coefficient, Spearman's rho, t-test, Wilcoxon's rank sum test, Wilcoxon's signed ranks test, gamma, chi-square, and one-way analysis of variance (ANOVA). Statistical tests were run using SPSS 11.5 for Windows. Table 1 shows a summary of objectives, hypotheses, variables, questionnaire items, and the related statistics. All rejection levels were set at the .05 significance level. Many of the research hypotheses contained several sub-hypotheses; therefore, there could be several statistical tests conducted for a single research hypothesis. The results of the statistical testing for the sub-hypotheses could indicate complete support, partial support, or no support for the research hypothesis. Subsequently, it was not necessarily true that a research hypothesis would be completely true or completely false. Therefore, the evidence for each individual sub-hypothesis will be discussed in the results section, and rejection or acceptance of each individual sub-hypothesis will be noted.

Hypothesis 1. *Among the women enrolled in a commercial weight loss program, there will be a relationship between appearance management and created appearance.*

The questionnaire items that were used included those related to appearance management (items 17 and 21-25) and created appearance (items 18-19). Four sub-hypotheses were formulated to evaluate the relationship between the variables. Data were analyzed using Pearson correlation coefficient, Spearman's rho, and t-tests to determine the relationship between the variables. Pearson correlation coefficient is used when the variables are both numeric variables, as is the case for items 17-19. Spearman's rho is a non-parametric correlation that is used with ranked data, i.e., when data are ranked from smallest to largest; the appearance management items (21-24) and the created appearance items (18-19) are examples of ranked data. A t-test is used when one variable is categorical (appearance management item 25) and the other variable is numeric (created appearance items 18-19) (Howell, 1987; Schulman, 1992).

Hypothesis 1A: Among the women enrolled in a commercial weight loss program, there will be a relationship between length of time and percentage of weight loss. Pearson correlation coefficient was used to determine the relationship between the length of time an individual had been a Weight Watchers® member (item 17) and the percentage of weight loss. This

Table 1

Summary of Data Analysis by Hypothesis

Objective	Hypothesis	Independent Variable	Dependent Variable	Statistical Analysis
1	-		Demographics	Descriptive
2	1A	#17 Length of time	#19/#18 Percentage of weight loss	Pearson correlation coefficient
2	1B	#21-#23 Follow program	#19/#18 Percentage of weight loss	Spearman's rho
2	1C	#24 Stay for meetings	#19/#18 Percentage of weight loss	Spearman's rho
2	1D	#25 Other activity	#19/#18 Percentage of weight loss	t-test
3	2A	#19/#18 Percentage of weight loss	(sum of #1-#16)/16= Average body cathexis score	Pearson correlation coefficient
3	2B	#20 Noticeable loss	#1-#16 Body cathexis	Wilcoxon's rank sum test
4	3	#1-#16 Body cathexis	#26-#48 Current clothing behavior	Gamma
5	4	#20 Noticeable loss	#26-#48 Current clothing behavior	Wilcoxon's rank sum test
6	5	#26-#48 Current clothing behavior	#49-#71 Prior clothing behavior	Wilcoxon's signed ranks test
7	6A	#72, #73, #76 Demographics	#17 Length of time	One-way ANOVA w/ test for linear trend
7	6A	#74, #75 Demographics	#17 Length of time	One-way ANOVA
7	6A	#77 Demographics	#17 Length of time	t-test
7	6B	#72, #73, #76 Demographics	#21-#23 Follow program	Gamma
7	6B	#74, #75, #77 Demographics	#21-#23 Follow program	Chi-square
7	6C	#72, #73, #76 Demographics	#24 Stay for meeting	Gamma
7	6C	#74, #75, #77 Demographics	#24 Stay for meeting	Chi-square
7	6D	#72-#77 Demographics	#25 Other activity	Chi-square
7	7A	#72, #73, #76 Demographics	#19/#18 Percentage of weight loss	One-way ANOVA w/ test for linear trend
7	7A	#74, #75 Demographics	#19/#18 Percentage of weight loss	One-way ANOVA
7	7B	#77 Demographics	#19/#18 Percentage of weight loss	t-test

Objective	Hypothesis	Independent Variable	Dependent Variable	Statistical Analysis
7	7B	#72-#77 Demographics	#20 Noticeable loss	Chi-square
7	8	#72, #73, #76 Demographics	(sum of #1-#16)/16= Average body cathexis score	Gamma
7	8	#74, #75, #77 Demographics	(sum of #1-#16)/16= Average body cathexis score	Chi-square
7	9	#72, #73, #76 Demographics	#26-#48 Current clothing behavior	Gamma
7	9	#74, #75, #77 Demographics	#26-#48 Current clothing behavior	Chi-square

percentage was calculated by dividing the number of pounds lost (item 19) by the total weight loss goal (item 18).

Hypothesis 1B: Among the women enrolled in a commercial weight loss program, there will be a relationship between following the weight loss program and percentage of weight loss. Spearmen's rho was used to determine the relationship between how diligently an individual followed the Weight Watchers® program (items 21-23) and the percentage of weight loss (item 19 divided by item 18).

Hypothesis 1C: Among the women enrolled in a commercial weight loss program, there will be a relationship between staying for meetings and percentage of weight loss. Spearman's rho was used to determine the relationship between how often an individual stayed for meetings (item 24) and the percentage of weight loss (item 19 divided by item 18).

Hypothesis 1D: Among the women enrolled in a commercial weight loss program, there will be a relationship between other weight loss activities and percentage of weight loss. A t-test was used to determine the relationship between appearance management item 25 (participation in other weight reduction activities) and percentage of weight loss (item 19 divided by item 18). This test was used to determine if the individuals who were the most successful in their weight loss relied only on the Weight Watchers® program or if they supplemented the program with additional appearance management activities.

Hypothesis 2. *Among the women enrolled in a commercial weight loss program, there will be a relationship between created appearance and body cathexis.*

The questionnaire items that were used included those related to created appearance (items 18-20) and body cathexis (items 1-16). Two sub-hypotheses were formulated to evaluate the relationship between the variables. Data were analyzed using Pearson correlation coefficient and Wilcoxon's rank sum test to determine the relationship between the variables.

Hypothesis 2A: Among the women enrolled in a commercial weight loss program, there will be a relationship between percentage of weight loss and the average body cathexis score. Pearson correlation coefficient was used to test the percentage of weight loss (item 19 divided by item 18) against the average body cathexis score. The average body cathexis score was determined by adding the scores for items 1-16 (the individual body cathexis items) and dividing the sum by 16 (the total number of body cathexis items).

Hypothesis 2B: Among the women enrolled in a commercial weight loss program, there will be a relationship between noticeable weight loss and the individual body cathexis items. Wilcoxon's rank sum test is a non-parametric equivalent of a two-group t-test and is used when

relating two groups of ordered categorical variables (Howell, 1987; Schulman, 1992). Wilcoxon's rank sum test was used to test specific body areas where noticeable weight loss had occurred against the body cathexis score for that specific body area. These included item 20 (where weight loss had been more noticeable) and items 1,4-10, and 12 (body cathexis). For example, to test the scores for hips, the data were sorted into two groups: those who reported a noticeable weight loss in the hip area and those who did not. These two groups were then tested against the body cathexis scores for item 4. This test was repeated for each body area included in item 20 (see Table 2).

Table 2

Testing body cathexis items against area of noticeable weight loss

Area of Noticeable Weight Loss	Body Cathexis Items
20a. Face	#1 Facial features
20b. Hips	# 4 Hips
20c. Thighs	# 5 Thighs
20d. Buttocks	# 6 Buttocks
20e. Legs	# 7 Legs
20f. Waist	# 8 Waist
20g. Stomach or abdomen	# 9 Stomach or abdomen
20h. Bust or breasts	# 10 Bust or breasts
20i. Arms	# 12 Arms

Hypothesis 3. *Among the women enrolled in a commercial weight loss program, there will be a relationship between body cathexis and current clothing behavior.*

The questionnaire items that were used included those related to body cathexis (items 1-16) and current clothing behavior (26-48). Data were analyzed using Gamma to determine the relationship between the variables.

Gamma is a measure of correlation and is used with two ordered categorical variables (Howell, 1987; Schulman, 1992). Both the body cathexis items and the clothing behavior items have ordered categories for their answer choices. The current clothing behavior items were paired with body cathexis items according to body part. For example, clothing behavior items 41-43 that dealt with sleeve coverage were tested against item 12 that referred to satisfaction or dissatisfaction with the arm. This test was repeated for each body area included in the body cathexis subscale (see Table 3).

Table 3

Testing clothing behavior items against body cathexis items

Body Cathexis Items	Current Clothing Behavior Items
#1 Facial features	#28-29 Color of clothing
#2 Complexion	#28-29 Color of clothing
#3 Hair	--
#4 Hips	#30-31 Pants #32-33 Dresses #36-37 Skirt style #48 Lower torso coverage
#5 Thighs	#30-31 Pants #32-33 Dresses #36-37 Skirt style
#6 Buttocks	#32-33 Dresses #44-45 Tucked #48 Lower torso coverage
#7 Legs	#34-35 Skirt length
#8 Waist	#38-39 Waistband #40 Belt #44-45 Tucked
#9 Stomach or abdomen	#30-31 Pants #32-33 Dresses #36-37 Skirt style #38-39 Waistband #40 Belt #44-45 Tucked
#10 Bust or breasts	#44-45 Tucked #46-47 Fit of tops
#11 Shoulders	#43 Sleeveless
#12 Arms	#41-43 Sleeve length
#13 Muscle tone	#43 Sleeveless
#14 Weight	#26-27 Fit of clothing #28-29 Color of clothing #34-35 Skirt length #46-47 Fit of tops
#16 Overall appearance	#26-27 Fit of clothing #28-29 Color of clothing

Hypothesis 4. *Among the women enrolled in a commercial weight loss program, there will be a relationship between created appearance and current clothing behavior.*

The questionnaire items that were used included those related to created appearance (item 20) and current clothing behavior (items 26-48). Data were analyzed using Wilcoxon's rank sum test to determine the relationship between the variables. For example, to test the scores for the waist area, the data were sorted into two groups: those who reported a noticeable weight loss in the waist area and those who did not. These two groups were then tested against clothing behaviors that corresponded to the waist area, such as item 40 (wearing a belt) and item 44 (wearing shirts tucked in). This test was repeated for each body area included in item 20 (see Table 4).

Table 4

Testing clothing behavior items against area of noticeable weight loss

#20 Noticeable Weight Loss	Clothing Behavior
a. Face	#28-29 Color of clothing
b. Hips	#30-31 Pants #32-33 Dresses #36-37 Skirt style #48 Lower torso coverage
c. Thighs	#30-31 Pants #32-33 Dresses #36-37 Skirt style
d. Buttocks	#32-33 Dresses #44-45 Tucked #48 Lower torso coverage
e. Legs	#34-35 Skirt length
f. Waist	#38-39 Waistband #40 Belt #44-45 Tucked
g. Stomach or abdomen	#30-31 Pants #32-33 Dresses #36-37 Skirt style #38-39 Waistband #40 Belt #44-45 Tucked
h. Bust or breasts	#44-45 Tucked #46-47 Fit of tops
i. Arms	#41-43 Sleeve length

Hypothesis 5. *Among the women enrolled in a commercial weight loss program, there will be a difference between their current clothing behavior and their clothing behavior prior to losing weight.*

The questionnaire items that were used included those related to current clothing behavior (items 26-48) and prior clothing behavior (items 49-71). The questionnaire items were paired together and tested to see if there was a difference between an individual's current clothing behavior and prior clothing behavior. For example, item 26 (loose fitting clothing) was paired with item 49 (loose fitting clothing). Data were analyzed using Wilcoxon's signed ranks test, which deals with paired data, to test the difference between the variables (Schulman, 1992).

Hypothesis 6. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and appearance management.*

The questionnaire items that were used included those related to demographics (items 72-77) and appearance management (items 17 and 21-25). Demographics that were used in statistical analysis included age, income, racial/ethnic group, occupation, education, and marital status. Four sub-hypotheses were formulated to evaluate the relationship between the variables. Data were analyzed using One-way ANOVA, t-tests, gamma and chi-square to determine the relationship between the variables. One-way ANOVA is used when one variable is categorical (with more than two categories) and the other variable is numeric (Schulman, 1992). Chi-square is used when one variable is categorical and the other has ordered categories (Schulman, 1992).

Hypothesis 6A: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and length of time. One-way ANOVA with a test for linear trend was used to test the demographic variables of age, income, and education (items 72, 73, and 76) against the length of time an individual had been in the Weight Watchers® program (item 17). One-way ANOVA was used to test the demographic variables of racial/ethnic group and occupation (items 74 and 75) against the length of time an individual had been in the Weight Watchers® program (item 17). A t-test was used to test the demographic variable of marital status (item 77) against the length of time an individual had been in the Weight Watchers® program (item 17).

Hypothesis 6B: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and following the weight loss program. Gamma was used to test the demographic variables of age, income, and education (items 72, 73, and

76) against how diligently an individual followed the Weight Watchers® program (items 21-23). Chi-square was used to test the demographic variables racial/ethnic group, occupation, and marital status (items 74, 75, and 77) against how diligently an individual followed the Weight Watchers® program (items 21-23).

Hypothesis 6C: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and staying for the meeting. Gamma was used to test the demographic variables of age, income, and education (items 72, 73, and 76) against how often an individual stayed for the Weight Watchers® meetings (item 24). Chi-square was used to test the demographic variables racial/ethnic group, occupation, and marital status (items 74, 75, and 77) against how often an individual stayed for the Weight Watchers® meetings (item 24).

Hypothesis 6D: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and other weight loss activities. Chi-square was used to test the demographic variables of age, income, racial/ethnic group, occupation, education, and marital status (items 72-77) against whether or not an individual supplemented the weight loss program with additional appearance management activities.

Hypothesis 7. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and created appearance.*

The questionnaire items that were used included those related to demographics (items 72-77) and created appearance (items 18-20). Demographics that were used in statistical analysis included age, income, racial/ethnic group, occupation, education, and marital status. Two sub-hypotheses were formulated to evaluate the relationship between the variables. Data were analyzed using One-way ANOVA, t-tests, and chi-square to determine the relationship between the variables.

Hypothesis 7A: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and percentage of weight loss. One-way ANOVA with a test for linear trend was used to test the demographic variables age, income, and education (items 72, 73, and 76) against the percentage of weight loss (item 19 divided by item 18). One-way ANOVA was used to test the demographic variables racial/ethnic group and occupation (items 74 and 75) against the percentage of weight loss (item 19 divided by item 18). A t-test was used to test the demographic variable of marital status (item 77) against the percentage of weight loss (item 19 divided by item 18).

Hypothesis 7B: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and noticeable weight loss. Chi-square was used to test the demographic variables of age, income, racial/ethnic group, occupation, education, and marital status (items 72-77) against the areas of noticeable weight loss (item 20).

Hypothesis 8. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and body cathexis.*

The questionnaire items that were used included those related to demographics (items 72-77) and body cathexis (items 1-16). Demographics that were used in statistical analysis included age, income, racial/ethnic group, occupation, education, and marital status. Data were analyzed using Gamma and chi-square to determine the relationship between the variables.

Gamma was used to test the demographic variables of age, income, and education (items 72, 73, and 76) against the average body cathexis score ([sum of items 1-16] divided by 16). These demographic items and the body cathexis items all had ordered categories for their answer choices; therefore the gamma test was the appropriate test to use. Chi-square was used to test the demographic variables of racial/ethnic group, occupation, and marital status (items 74, 75, and 77) against the average body cathexis score ([sum of items 1-16] divided by 16).

Hypothesis 9. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and current clothing behavior.*

The questionnaire items that were used included those related to demographics (items 72-77) and current clothing behavior (items 26-48). Demographics that were used in statistical analysis included age, income, racial/ethnic group, occupation, education, and marital status. Data were analyzed using Gamma and chi-square to determine the relationship between the variables.

Gamma was used to test the demographic variables of age, income, and education (items 72, 73, and 76) against the current clothing behavior (items 26-48). These demographic items and the current clothing behavior items all had ordered categories for their answer choices; therefore the gamma test was the appropriate test to use. Chi-square was used to test the demographic variables of racial/ethnic group, occupation, and marital status (items 74, 75, and 77) against the current clothing behavior (items 26-48).

CHAPTER FIVE
Results and Discussion

The purpose of this research was to determine the relationship between appearance management, created appearance, body cathexis, and clothing behavior for a group of women enrolled in a commercial weight loss program. Data were collected from female members enrolled in a weight loss program in Southwestern Virginia. This chapter presents the description of the sample, results of reliability testing, results by questionnaire section, the results of the statistical analysis for the nine hypotheses, and discussion of the findings based on the model.

Description of the Sample

The sample consisted of females who were enrolled in Weight Watchers® programs in Southwestern Virginia. Data were collected during March 2003. Of the 220 questionnaires that were distributed, 171 were returned, which yielded a response rate of 77.7 percent. Questionnaires were collected at four meetings that were held at the Christiansburg, VA Weight Watchers® center. Questionnaires were also collected at Weight Watchers® meetings held in Radford, VA and Floyd, VA, and from Weight Watchers® members who also worked at Blacksburg Middle School and Virginia Tech (see Table 5).

Table 5

List of collection sites

Collection Site	Questionnaires Collected	Percentage
Christiansburg, Monday	29	16.96%
Christiansburg, Tuesday	21	12.28%
Christiansburg, Wednesday	9	5.26%
Christiansburg, Thursday	24	14.03%
Radford, Tuesday	45	26.32%
Floyd, Wednesday	31	18.13%
Blacksburg Middle School	4	2.34%
Virginia Tech	8	4.68%
Total	171	100.00%

The distribution of the subjects with respect to demographics is presented in Table 6. The age of the subjects varied, with the following categories representing the largest percentages of the sample: age 50-59 (22.8%), age 40-49 (20.5%), age 21-29 (19.9%) and age 30-39 (18.1%). The majority (46.2%) of the sample had family incomes between $30,000 and $70,000 and the majority (96.5%) indicated their racial/ethnic group was White/Caucasian. The occupation of the respondents varied, with the highest percentage (26.3%) indicating their occupation was in the professional category (lawyer, teacher, doctor, etc.). Appendix C includes a list of "other" occupations. The majority of respondents were either in college (28.7%) or indicated they had a college degree (36.8%). The majority (70.2%) were married. Comments from survey participants are included in Appendix D.

Table 6

Demographic variables

Demographic Variable	Frequency	Percentage
Age		
Under 21	11	6.4%
21-29	34	19.9%
30-39	31	18.1%
40-49	35	20.5%
50-59	39	22.8%
60 or over	18	10.5%
No response	3	1.8%
Total	171	100.0%
Total Family Income		
$10,000 or below	3	1.8%
$10,001 - $30,000	17	9.9%
$30,001 - $50,000	41	24.0%
$50,001 - $70,000	38	22.2%
$70,001 - $90,000	21	12.3%
$90,001 or more	27	15.8%
No response	24	14.0%
Total	171	100.0%

Demographic Variable	Frequency	Percentage
Racial/Ethnic Group		
White/Caucasian	165	96.5%
Black/African American	1	.6%
Latino/Hispanic/Hispanic American	1	.6%
No response	4	2.3%
Total	171	100.0%
Occupation		
Student	27	15.8%
Managerial	15	8.8%
Secretary/Clerical	33	19.3%
Professional	48	28.1%
Retired	16	9.4%
Not Employed	17	9.9%
Other	12	7.0%
No response	3	1.8%
Total	171	100.0%
Highest Level of Education		
High School or less	30	17.5%
Some College	49	28.7%
Associate's Degree	20	11.7%
Bachelor's Degree	44	25.7%
Graduate Degree	25	14.6%
No response	3	1.8%
Total	171	100.0%
Marital Status		
Married	120	70.2%
Not Married	48	28.1%
No response	3	1.8%
Total	171	100.0%

Note: Percentages may not equal 100.0% due to rounding.

Results of Reliability Testing

Cronbach's alpha coefficient was computed to test for internal consistency of the body cathexis and clothing behavior subscales of the instrument. The alpha coefficient for the body cathexis subscale was .8810 and the alpha coefficient for the clothing behavior subscale was .8354. A scale can be considered to have good reliability if the alpha value is 0.70 or greater (Nunnally, 1978). The results of the testing indicate good reliability for both subscales.

Appearance Management

The appearance management items included questions that asked the length of time the respondents had been a member of Weight Watchers®, how closely they followed the Weight Watchers® program (staying within their points range, drinking six glasses of water each day, and eating five fruits and vegetables each day), and how often they stayed for meetings. The length of time respondents had been a member of Weight Watchers® varied from one week to 28 years. The mean length of time was 1.77 years. Many respondents noted that they had previously been members, but only their current time in the program was counted.

The majority (62.6%) of respondents indicated they stayed within their points range "Most of the time," while 22.2 percent indicated they "Always" stayed within their points range. The percentage of respondents that indicated they "Always" drank six glasses of water every day was 39.8 percent, with 31.6 percent indicating they drank the required number of glasses "Most of the time." The majority (44.4%) indicated they ate five fruits and vegetables "Most of the time," while 28.7% indicated they did "Sometimes". The majority (56.1%) indicated they stayed for the meeting "Every week," and 19.9 percent indicated they stayed "Three times a month." A complete table of the distribution of answers is presented in Appendix E. Items that referred to following the weight loss program (items 21-24) were reverse scored for statistical testing.

Respondents were also asked if they participated in other weight reduction activities (aerobic exercise, walking, weight lifting, etc.) outside of Weight Watchers®. This item was included to determine if the individuals who were the most successful in their weight loss relied only on the Weight Watchers® program or if they supplemented the program with additional appearance management activities. Respondents were allowed to write in more than one activity. The majority (80.7%) indicated they did participate in other activities. Appendix F includes a description and frequency of the other activities. The most popular activity was walking, with 53.2 percent of the sample indicating that they walked. Weight lifting was the second most popular activity, with a response rate of 17.0 percent.

Created Appearance

Created appearance referred to the appearance that was created through weight loss. The questionnaire items that referred to created appearance included the respondents' weight loss goal (how much weight in pounds they wished to lose) and how much weight in pounds they had lost since they had joined Weight Watchers®. Weight loss goals reported by the respondents ranged from 10 pounds to 216 pounds. The mean was 58 pounds. The amount of weight lost ranged from one pound to 117 pounds. The mean amount of weight lost was 17.95 pounds. Appendix G includes tables that illustrate the distribution of responses related to the weight loss goal and the amount lost in 50-pound ranges. Many respondents noted they had previously lost weight on the program, but only their current weight loss was counted.

For each respondent, the amount of weight lost was divided by her weight loss goal to obtain a percentage of weight loss. For example, if a respondent indicated she wished to lose 60 pounds and had already lost 15 pounds, the percentage of weight loss was 25 percent. The percentage of weight loss was calculated to use in statistical testing for Hypotheses 1 and 7. Table 7 shows the distribution of the percentage of weight loss for respondents.

Table 7

Percentage of weight loss (amount of weight lost divided by weight loss goal)

Percentage of Weight Loss	Frequency	Percentage
0%	4	2.3%
1% - 25%	75	43.9%
26% - 50%	47	27.5%
51% - 75%	14	8.2%
76% - 100%	26	15.2%
Over 100%	5	2.9%
Total	171	100.0%

Note: Totals may not add up to 100.0% due to rounding.

Respondents were also asked to indicate the body area where their weight loss had been more noticeable. They were able to choose up to three areas from the following choices: face, hips, thighs, buttocks, legs, waist, stomach or abdomen, bust or breasts, arms, no weight loss, and no noticeable weight loss. Forty-six percent of respondents indicated their weight loss was more noticeable in the face. Respondents also indicated noticeable weight losses in the lower torso, with 36.8 percent indicating noticeable weight losses in the stomach or abdomen, and 29.2 percent indicating noticeable weight losses in the waist. A complete table of the distribution of responses is presented in Table 8.

Table 8

Number of respondents indicating they had a noticeable weight loss in a certain body area

Body Area	Yes	%	No	%
Face	**78**	**45.6**	93	54.4
Hips	36	21.1	135	78.9
Thighs	25	14.6	146	85.4
Buttocks	33	19.3	138	80.7
Legs	26	15.2	145	84.8
Waist	50	29.2	121	70.8
Stomach or abdomen	63	36.8	108	63.2
Bust or breasts	21	12.3	150	87.7
Arms	9	5.3	162	94.7
No weight loss	3	1.8	168	98.2
No noticeable weight loss	28	16.4	143	83.6

Notes: Totals may not add up to 100.0% due to rounding.
Bold indicates majority response for having a noticeable weight loss.

Body Cathexis

Respondents were asked to rate their current satisfaction or dissatisfaction with the following body parts or features: facial features, complexion, hair, hips, thighs, buttocks, legs, waist, stomach or abdomen, bust or breasts, shoulders, arms, muscle tone, weight, height, and overall appearance. The response choices were Very Satisfied, Satisfied, Dissatisfied, and Very Dissatisfied. For the purposes of discussing the body cathexis of respondents, the responses for "Satisfied" and "Very Satisfied" were combined to determine satisfaction, and the responses for "Dissatisfied" and "Very Dissatisfied" were combined to determine dissatisfaction. However, these groupings were not used in the statistical analysis. Satisfaction was determined by having at least 50 percent of respondents choose "Satisfied" or "Very Satisfied" as their response. Respondents indicated satisfaction with the following body parts or features: facial features (88.3%), complexion (73.7%), hair (87.8%), bust or breasts (60.8%), shoulders (71.3%), and height (88.9%).

Dissatisfaction was determined by having at least 50 percent of respondents choose "Dissatisfied" or "Very Dissatisfied" as their response. Respondents indicated dissatisfaction with ten of the 16 body parts or features: hips (73.1%), thighs (84.2%), buttocks (74.8%), legs (70.2%), waist (77.2%), stomach or abdomen (89.5%), arms (57.9%), muscle tone (74.9%),

weight (82.5%), and overall appearance (53.2%). The areas with which respondents were most dissatisfied with are areas that are commonly associated with weight gain in women (Cash & Henry, 1985; Charles & Kerr, 1986; McAllister & Caltabiano, 1994; Monteath & McCabe, 1997). A complete table of the distribution of answers is presented in Appendix H.

An average body cathexis score was computed by adding up the answers for the 16 items in the body cathexis subscale and dividing the sum by 16, resulting in a number between 1 and 5. This average body cathexis score was used in statistical testing for Hypotheses 2A and 8. Table 9 shows the frequency distribution for average body cathexis score for respondents. The majority (76.0%) of the subjects had an average body cathexis score in the 2.0-2.9 range, indicating dissatisfaction.

Table 9

Average body cathexis score of respondents

Average Body Cathexis Score	**Frequency**	**Percentage**
1.0-1.9 (Very dissatisfied)	26	15.2%
2.0-2.9 (Dissatisfied)	130	76.0%
3.0-3.9 (Satisfied)	15	8.8%
4.0-5.0 (Very satisfied)	0	0.0%
Total	171	100.0%

Current Clothing Behavior

The section on current clothing behavior asked respondents to indicate the frequency with which they currently wore certain clothing items or styles. A complete table of the distribution of answers is presented in Appendix I. Answer choices were as follows: Always, Most of the time, Sometimes, Rarely, and Never. For the purposes of discussing the current clothing behavior of respondents, the responses for “Always” and “Most of the Time” were combined to determine clothing items worn with the most frequency, and the responses for “Rarely” and “Never” were combined to determine clothing items worn with the least frequency. However, these groupings were not used in the statistical analysis. The items currently worn with the greatest frequency, indicated by at least 50 percent of the respondents choosing “Always” or “Most of the Time” as their response, were flat front pants (68.5%), skirts below knee length (60.8%), pants and skirts with a waistband (56.1%), and shirts, blouses, or sweaters that were untucked (56.1%). The items currently worn with the least frequency, indicated by at least 50 percent of the respondents choosing “Rarely” or “Never” as their

response, were tight fitting clothing (55.5%); pleated front pants (68.4%); skirts above knee length (62.0%); a belt with pants and skirts (54.4%); shirts, blouses, or sweaters that were sleeveless (60.2%); and shirts, blouses, or sweaters that were tucked in (53.8%).

In order to compare the results, the current clothing behavior items will be discussed by comparing clothing items that relate to the same body part. The answer categories of “Always” and “Most of the time” were combined to determine which items were worn with the most frequency. Again, these groupings were used for discussion purposes only, and not used in the statistical analysis. When the items for loose fitting clothing and tight fitting clothing are compared, respondents indicated they currently wore loose fitting clothing (49.1%) with more frequency than tight fitting clothing (10.6%). Respondents indicated they currently wore dark colored clothing (42.1%) with more frequency than bright colored clothing (17.6%). Flat front pants without pleats (68.5%) were currently worn with more frequency than pleated front pants (11.1%). Respondents currently wore unfitted dresses (40.4%) with more frequency than fitted dresses (21.0%). Skirts that were below knee length (60.8%) were currently worn with more frequency than skirts that were above knee length (12.8%). Straight skirts (37.4%) were currently worn with more frequency than full skirts (22.2%). Pants and skirts that had a waistband (56.1%) were currently worn with more frequency than pants and skirts with a full or partial elastic waistband (21.1%). Most respondents indicated (by choosing “Rarely” or “Never”) that they currently did not wear a belt with pants and skirts (54.5%). Respondents indicated they currently wore long sleeved tops (18.1%) with more frequency than short sleeved tops (12.9%) or sleeveless tops (1.8%). The majority of responses for all three sleeve lengths were in the “Sometimes” category, with many respondents commenting that sleeve length depended on the weather. Respondents indicated they currently wore their tops untucked (56.1%) with more frequency than tucked in (32.2%). Loose-fitting tops (40.3%) were worn with more frequency than close-fitting tops (14.1%), and the majority indicated they “sometimes” currently wore tops that cover their buttocks and hips (35.7%).

Prior Clothing Behavior

The section on prior clothing behavior asked respondents to indicate the frequency with which they wore certain clothing items or styles before they lost weight. Answer choices were as follows: Always, Most of the time, Sometimes, Rarely, and Never. Instructions for that part of the questionnaire directed respondents to skip that section if they had not lost weight (i.e., their clothing behavior would not have changed). Thirty-eight respondents (22.22%) skipped the

section on prior clothing behavior, indicating they had not lost enough weight to change their clothing behavior. A complete table of the distribution of answers is presented in Appendix J.

For the purposes of discussing the prior clothing behavior of respondents, the responses for “Always” and “Most of the Time” were combined to determine clothing items worn with the most frequency, and the responses for “Rarely” and “Never” were combined to determine clothing items worn with the least frequency However, these groupings were not used in the statistical analysis. The item worn prior to weight loss with the greatest frequency, indicated by at least 50 percent of the respondents choosing “Always” or “Most of the Time” as their response, was shirts, blouses, or sweaters that were untucked (50.9%). The item worn with the least frequency, indicated by at least 50 percent of the respondents choosing “Rarely” or “Never” as their response, was skirts above knee length (53.8%).

In order to compare the results, the prior clothing behavior items will be discussed by comparing clothing items that relate to the same body part. The answer categories of “Always” and “Most of the time” were combined to determine which items were worn with the most frequency prior to weight loss. Again, these groupings were used for discussion purposes only, and not used in the statistical analysis. Respondents indicated they wore loose fitting clothing (49.7%) prior to weight loss with more frequency than tight fitting clothing (14.6%). Dark colored clothing (41.5%) was worn with more frequency prior to weight loss than bright colored clothing (11.1%). Flat front pants without pleats (39.8%) were worn prior to weight loss with more frequency than pleated front pants (14.6%). Respondents indicated they wore unfitted dresses (42.7%) prior to weight loss with more frequency than fitted dresses (8.8%). More respondents wore skirts that were below knee length (48.5%) with more frequency prior to weight loss than skirts above knee length (9.3%). Straight skirts (20.5%) and full skirts (24.6%) were worn almost equally prior to weight loss, as were pants and skirts with a waistband (31.6%) and pants and skirts with a full or partial elastic waist (29.2%). More respondents indicated they did not often wear a belt with pants and skirts (48.6%) prior to weight loss. Respondents indicated they wore long sleeved tops (17.5%) prior to weight loss with more frequency than short sleeved tops (11.1%) or sleeveless tops (1.8%). More respondents indicated they wore their tops untucked (50.9%) prior to weight loss than tucked in (6.5%). Loose-fitting tops (42.7%) were worn with more frequency prior to weight loss than tight-fitting tops (8.2%). More indicated they did wear shirts, blouses, or sweaters that cover the buttocks and hips (31.6%) prior to weight loss.

Current Clothing Behavior vs. Prior Clothing Behavior

The frequency of responses for “Always” and “Most of the Time” were combined in order to compare current and prior clothing behavior by clothing item. However, these groupings were used only for discussion purposes and were not used in the statistical analysis. When the frequency of responses for “Always” and “Most of the Time” were compared item by item between current and prior clothing behavior, the following differences were noted (see Table 10). Tight fitting clothing was currently worn with less frequency than before weight loss. Respondents indicated they currently wore bright colored clothing with more frequency than before weight loss. Flat front pants were currently worn with more frequency than before weight loss, and pleated front pants were currently worn with less frequency than before weight loss. Fitted dresses were currently worn with more frequency than before weight loss. Respondents indicated they currently wore above-knee length skirts with more frequency than before weight loss, but also currently wore below-knee length skirts with more frequency than before weight loss. Straight skirts were currently worn with more frequency than before weight loss. Pants and skirts with a full or partial elastic waist were currently worn with less frequency currently than before weight loss, and pants and skirts with a waistband were currently worn with more frequency than before weight loss. Respondents indicated they currently wore a belt with pants and skirts with more frequency than before weight loss. Respondents currently wore tops tucked in with more frequency than before weight loss. Close-fitting tops were currently worn with more frequency than before weight loss, and tops that cover the buttocks and hips were currently worn with less frequency currently than before weight loss.

When the frequency of responses for “Always” and “Most of the Time” were compared item by item between current and prior clothing behavior, not much of a difference was noted between the current clothing behavior and the behavior prior to weight loss for the following items: loose fitting clothing, dark colored clothing, unfitted dresses, full skirts, long sleeved tops, short sleeved tops, sleeveless tops, untucked tops, and loose-fitting tops. This indicates that clothing behavior for these items changed very little with weight loss. The differences between current and prior clothing behavior were tested in Hypothesis 5.

Table 10

Frequency with which respondents wore clothing items before and after weight loss

Clothing Behavior Item	Current Frequency	Prior Frequency
Loose fitting clothing	49.1%	49.7%
Tight fitting clothing	10.6%	14.6%
Dark colored clothing	42.1%	41.5%
Bright colored clothing	17.6%	11.1%
Flat front pants	68.5%	39.8%
Pleated front pants	11.1%	14.6%
Unfitted dresses	40.4%	42.7%
Fitted dresses	21.0%	8.8%
Skirts above knee length	12.8%	9.3%
Skirts below knee length	60.8%	48.5%
Straight skirts	37.4%	20.5%
Full skirts	22.2%	24.6%
Elastic waist	21.1%	29.2%
Waistband	56.1%	31.6%
Belt	19.9%	11.7%
Long sleeved tops	18.1%	17.5%
Short sleeved tops	12.9%	11.1%
Sleeveless tops	1.8%	1.8%
Tucked in tops	32.2%	6.5%
Untucked tops	56.1%	50.9%
Close-fitting tops	14.1%	8.2%
Loose-fitting tops	40.3%	42.7%
Lower torso coverage	24.0%	31.6%

Note: Responses for “Always” and “Most of the Time” were added together to obtain frequencies reported.

Results of Hypothesis Testing

Hypotheses were tested using SPSS 11.5 for Windows. All rejection levels were set at the .05 significance level. There were several questionnaires for which a respondent may not have answered one or two items; however, these questionnaires were retained and used in the statistical analysis. For any individual questionnaire item, a missing response was treated as "No Response" and the statistical analysis was based on completed responses. In the case of the demographic variable for income, twenty-four respondents did not indicate an answer, with several commenting that they did not want to give out such information. Again, statistical testing was based on completed responses.

Hypothesis 1. *Among the women enrolled in a commercial weight loss program, there will be a relationship between appearance management and created appearance.*

The questionnaire items that were used included those related to appearance management (items 17 and 21-25) and created appearance (items 18-19). Pearson correlation coefficient, Spearman's rho, and t-tests were used to determine the relationship between the variables. The results of the four sub-hypotheses are presented. All rejection levels were set at the .05 significance level.

Hypothesis 1A: Among the women enrolled in a commercial weight loss program, there will be a relationship between length of time and percentage of weight loss. Pearson correlation coefficient was used to determine the relationship between the length of time an individual had been a Weight Watchers® member (item 17) and the percentage of weight loss. This percentage was calculated by dividing the number of pounds lost (item 19) by the total weight loss goal (item 18).

It was expected that there would be a positive relationship between length of time and percentage of weight loss; that is, the longer an individual had been in the weight loss program, the greater the percentage of weight loss. Therefore, the null hypothesis was there was no correlation between the two variables ($\rho = 0$), and the alternate hypothesis was $\rho > 0$. The correlation coefficient ($r = .254$, $p = .000$) indicated there was a weak positive correlation between length of time and percentage of weight loss; therefore, the null hypothesis was rejected. There was a positive relationship between the two variables; the longer a respondent had been in the Weight Watchers® program, the greater the percentage of weight loss.

Hypothesis 1B: Among the women enrolled in a commercial weight loss program, there will be a relationship between following the weight loss program and percentage of weight loss. Spearman's rho was used to test the relationship between how diligently an individual followed

the Weight Watchers® program (items 21-23) and the percentage of weight loss (item 19 divided by item 18). Items 21-23 referred to staying within the points range, drinking six glasses of water every day, and eating five fruits and vegetables every day.

It was expected that there would be a positive relationship between following the weight loss program and percentage of weight loss; that is, the more diligently an individual followed the weight loss program, the greater the percentage of weight loss. Therefore, the null hypothesis for each of the items 21-23 was there was no correlation between following the program and percentage of weight loss ($\rho = 0$), and the alternate hypothesis for each item was $\rho > 0$.

The correlation coefficient for all three items (points: $r_s = .053$, $p = .248$; water: $r_s = .087$, $p = .128$; fruits/vegetable: $r_s = .095$, $p = .110$) indicated there was no correlation between following the weight loss program and percentage of weight loss; therefore, the null hypotheses were accepted. Therefore, there was not a relationship between following the program more diligently and respondents' weight loss.

Hypothesis 1C: Among the women enrolled in a commercial weight loss program, there will be a relationship between staying for meetings and percentage of weight loss. Spearman's rho was used to test the relationship between how often an individual stayed for meetings (item 24) and the percentage of weight loss (item 19 divided by item 18).

It was expected that there would be a positive relationship between staying for meetings and percentage of weight loss; that is, the more often an individual stayed for meetings, the greater the percentage of weight loss. Therefore, the null hypothesis was there would be no correlation between the two variables ($\rho = 0$), and the alternate hypothesis was $\rho > 0$. The correlation coefficient ($r_s = -.073$, $p = .828$) indicated there was no correlation between staying for meetings and percentage of weight loss; therefore, the null hypothesis was accepted. There was not a relationship between staying for meetings more often and the percentage of weight loss.

Hypothesis 1D: Among the women enrolled in a commercial weight loss program, there will be a relationship between other weight loss activities and percentage of weight loss. A t-test was used to determine the relationship between appearance management item 25 (participation in other weight reduction activities) and percentage of weight loss (item 19 divided by item 18). This test was used to determine if the individuals who were the most successful in their weight loss relied only on the Weight Watchers® program or if they supplemented the program with additional appearance management activities.

It was expected that there would be a positive relationship between other weight loss activities and percentage of weight loss; that is, individuals who participated in weight reduction activities outside of the Weight Watchers® program would have a greater percentage of weight loss. Therefore, the null hypothesis was there would be no difference in the mean percentage of weight loss between the two groups, those who participated in other weight loss activities and those who did not ($\mu_{\text{Other Activity}} = \mu_{\text{No Activity}}$). The alternate hypothesis was that the percentage of weight loss would be greater for those who had participated in other weight loss activities than for those who did not ($\mu_{\text{Other Activity}} > \mu_{\text{No Activity}}$). The t-test results ($t = -.091$, $p = .536$) indicated there was no significant difference between the means of the two groups; therefore, the null hypothesis was accepted. Those who participated in other weight loss activities did not differ significantly in percentage of weight loss from those who did not participate in other weight loss activities.

Summary of Hypothesis 1. This hypothesis tested the relationship between appearance management and created appearance. It was hypothesized that there would be a positive relationship between the appearance management items and created appearance. Table 11 shows the test results for Hypothesis 1.

The results of the statistical tests indicated that there was a weak positive relationship between length of time in the weight loss program and the percentage of weight loss. Those who had been in the weight loss program longer had a greater percentage of weight loss. The results of the other three tests indicated there was no relationship between percentage of weight loss and following the weight loss program, staying for meetings, or participation in other weight loss activities. However, an examination of the frequency of responses indicated that most respondents stated they “Always” or “Most of the time” stayed within their points range (84.4%), drank eight glasses of water daily (71.4%), and ate five fruits and vegetables every day (61.9%). Most respondents (76.0%) also indicated they stayed for meetings every week or at least three times a month. The majority (80.7%) also stated they participated in other weight loss activities. Even though the relationship between appearance management and percentage of weight loss was not significant, respondents did indicate they actively engaged in appearance management behaviors.

Out of the six tests conducted to examine the relationship between appearance management and created appearance, the results of five of the tests indicated acceptance of the individual null hypotheses. The results for the first test indicated rejection of the null hypothesis, but the correlation was weak. Therefore, results indicate minimal support for Hypothesis 1.

Table 11

Test results for Hypothesis 1

Test	Test Statistic	P-value
Length of time in program and Percentage of weight loss	r = .254	.000*
Staying within points range and Percentage of weight loss	r_s = .053	.248
Drinking 6 glasses of water daily and Percentage of weight loss	r_s = .087	.128
Eating 5 fruits/vegetables daily and Percentage of weight loss	r_s = .095	.110
Staying for meetings and Percentage of weight loss	r_s = -.073	.828
Other weight loss activity and Percentage of weight loss	t = -.091	.536

Note: * = Significant at the .05 level.

Hypothesis 2. *Among the women enrolled in a commercial weight loss program, there will be a relationship between created appearance and body cathexis.*

The questionnaire items that were used included those related to created appearance (items 18-20) and body cathexis (items 1-16). Pearson correlation coefficient and Wilcoxon's rank sum test were used to determine the relationship between the variables. The results of the two sub-hypotheses are presented. All rejection levels were set at the .05 significance level.

Hypothesis 2A: Among the women enrolled in a commercial weight loss program, there will be a relationship between percentage of weight loss and the average body cathexis score. Pearson correlation coefficient was used to test the percentage of weight loss (item 19 divided by item 18) against the average body cathexis score. The average body cathexis score was determined by adding the scores for items 1-16 (the individual body cathexis items) and dividing the sum by 16 (the total number of body cathexis items).

It was expected that there would be a positive relationship between percentage of weight loss and average body cathexis score; that is, respondents who had a greater percentage of weight loss would have a higher body cathexis score. Therefore, the null hypothesis was there would be no correlation between the two variables ($\rho = 0$), and the alternate hypothesis was

$\rho > 0$. The correlation coefficient (r = .390, p = .000) indicated there was a correlation between percentage of weight loss and average body cathexis score; therefore, the null hypothesis was rejected. There was a positive relationship between the two variables; respondents who had a greater percentage of weight loss had higher average body cathexis scores.

Hypothesis 2B: Among the women enrolled in a commercial weight loss program, there will be a relationship between noticeable weight loss and the individual body cathexis items. Wilcoxon's rank sum test was used to test specific body areas where noticeable weight loss had occurred against the body cathexis score for that specific body area. Questionnaire items that were used included item 20 (where had weight loss been more noticeable) and items 1, 4-10, and 12 (body cathexis for facial features, hips, thighs, buttocks, legs, waist, stomach or abdomen, bust or breasts, and arms). For example, to test the scores for hips, the data were sorted into two groups: those who reported a noticeable weight loss in the hip area and those who did not. These two groups were then tested against the body cathexis scores for item 4 (hips). This test was repeated for each body area included in item 20. It should be noted that SPSS computes Z, the test statistic for Wilcoxon's rank sum test, in such a way that it is always negative.

For all body areas, it was expected there would be a positive relationship between noticeable weight loss and body cathexis; that is, it was expected that those who indicated they had a noticeable weight loss in an area would have a higher body cathexis score for that area. For example, it was expected that those who indicated they had a noticeable weight loss in the hips would have a higher body cathexis score in the hips than those who did not have a noticeable weight loss. Therefore, the null hypothesis for all body areas was there would be no difference in body cathexis scores between those who had a noticeable weight loss and those who had not ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis for all body areas was that those who had a greater percentage of weight loss in an area would have a higher body cathexis score for that area ($\mu_{Loss} > \mu_{No\ Loss}$).

Face. The results of the Wilcoxon's rank sum test (Z = -.619, p = .268) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents who stated they had a noticeable weight loss in the face did not differ in body cathexis scores for the face from those who had not had a noticeable weight loss in the face. Therefore, there was no relationship between a noticeable weight loss in the face and the body cathexis score for face.

Hips. The results of the test (Z = -.258, p = .602) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents

who stated they had a noticeable weight loss in the hips did not differ in body cathexis scores for the hips from those who had not had a noticeable weight loss in the hips. Therefore, there was no relationship between a noticeable weight loss in the hips and the body cathexis score for hips.

Thighs. The results of the test (Z = -1.207, p = .114) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents who stated they had a noticeable weight loss in the thighs did not differ in body cathexis scores for the thighs from those who had not had a noticeable weight loss in the thighs. Therefore, there was no relationship between a noticeable weight loss in the thighs and the body cathexis score for thighs.

Buttocks. The results of the test (Z = -.788, p = .215) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents who stated they had a noticeable weight loss in the buttocks did not differ in body cathexis scores for the buttocks from those who had not had a noticeable weight loss in the buttocks. Therefore, there was no relationship between a noticeable weight loss in the buttocks and the body cathexis score for buttocks.

Legs. The results of the test (Z = -.787, p = .216) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents who stated they had a noticeable weight loss in the legs did not differ in body cathexis scores for the legs from those who had not had a noticeable weight loss in the legs. Therefore, there was no relationship between a noticeable weight loss in the legs and the body cathexis score for legs.

Waist. The results of the test (Z = -1.007, p = .157) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents who stated they had a noticeable weight loss in the waist did not differ in body cathexis scores for the waist from those who had not had a noticeable weight loss in the waist. Therefore, there was no relationship between a noticeable weight loss in the waist and the body cathexis score for waist.

Stomach or abdomen. The results of the test (Z = -.390, p = .652) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents who stated they had a noticeable weight loss in the stomach or abdomen did not differ in body cathexis scores for the stomach or abdomen from those who had not had a noticeable weight loss in the stomach or abdomen. Therefore, there was no relationship

between a noticeable weight loss in the stomach or abdomen and the body cathexis score for stomach or abdomen.

Bust or breasts. The results of the test (Z = -.108, p = .457) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents who stated they had a noticeable weight loss in the bust or breasts did not differ in body cathexis scores for the bust or breasts from those who had not had a noticeable weight loss in the bust or breasts. Therefore, there was no relationship between a noticeable weight loss in the bust or breasts and the body cathexis score for bust or breasts.

Arms. The results of the test (Z = -2.002, p = .0215) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents who stated they had a noticeable weight loss in the arms did differ in body cathexis scores for the arms from those who had not had a noticeable weight loss in the arms (see Table 12). Results indicated there was a higher body cathexis mean score for those who had a noticeable weight loss in the arms than for those who did not have a noticeable weight loss in the arms.

Table 12

Mean ranks for noticeable loss in arms and body cathexis score for arms

Noticeable loss in Arms	**N**	**Mean Ranks for Body Cathexis for Arms**
Yes	9	113.94
No	160	83.37
Total	169	

Summary of Hypothesis 2. This hypothesis tested the relationship between created appearance and body cathexis. It was hypothesized there would be a positive relationship between created appearance and body cathexis. Table 13 shows the test results for Hypothesis 2.

Results of the statistical testing indicated there was a positive relationship between the percentage of weight loss and the average body cathexis score. Respondents with a greater percentage of weight loss indicated a higher average body cathexis score; therefore, those who had lost a greater percentage of weight were more satisfied on average with their body. This finding corresponds to the findings of other studies that found that successful weight loss was positively related to an increased body image (Cash, 1993; Cash, 1994; Leon, 1976; Loftis, 1981).

Table 13

Test results for Hypothesis 2

Test	Test Statistic	P-value
Percentage of weight loss and Average body cathexis score	r = .390	.000*
Noticeable loss in face and Body cathexis score for face	Z = -.619	.268
Noticeable loss in hips and Body cathexis score for hips	Z = -.258	.602
Noticeable loss in thighs and Body cathexis score for thighs	Z = -1.207	.114
Noticeable loss in buttocks and Body cathexis score for buttocks	Z = -.788	.215
Noticeable loss in legs and Body cathexis score for legs	Z = -.787	.216
Noticeable loss in waist and Body cathexis score for waist	Z = -1.007	.157
Noticeable loss in stomach and Body cathexis score for stomach	Z = -.390	.652
Noticeable loss in bust and Body cathexis score for bust	Z = -.108	.457
Noticeable loss in arms and Body cathexis score for arms	Z = -2.002	.0215*

Note: * = Significant at the .05 level.

Results of statistical testing also indicated that except for the arms, there was no relationship between a noticeable weight loss in an area and the body cathexis score for that area. Results showed that there was no relationship between a noticeable weight loss in the face, hips, thighs, buttocks, legs, waist, stomach or abdomen, or bust or breasts and the body cathexis scores for those areas. Having a noticeable weight loss in those areas was not related to how satisfied a respondent was with the area. An examination of the frequency of responses indicated that more respondents (45.6%) stated they had a noticeable weight loss in the face, and that the next highest frequencies were for the stomach or abdomen (36.8%), waist (29.2%), hips (21.1%), and buttocks (19.3%). These last four areas are all related to the lower torso, and

are areas with which women tend to be more dissatisfied (Cash & Henry, 1985; Charles & Kerr, 1986; McAllister & Caltabiano, 1994; Monteath & McCabe, 1997). Most respondents did indicate they were currently dissatisfied with the stomach or abdomen (89.5%), waist (77.2%), hips (73.1%), and buttocks (74.8%). Cash (1992) also found that even though people had lost weight, they still had a lowered body image.

Results did indicate a positive relationship between a noticeable weight loss in the arms and the body cathexis score for the arms. Respondents who indicated they had a noticeable weight loss in the arms were more satisfied with the arms than those who had not indicated a noticeable weight loss. This finding corresponds to the findings of other studies that found that successful weight loss was positively related to an increased body image (Cash, 1993; Cash, 1994; Leon, 1976; Loftis, 1981). An interesting finding is that most respondents (57.9%) indicated they were “Dissatisfied” or “Very Dissatisfied” with the arms.

Out of the ten tests conducted to examine the relationship between created appearance and body cathexis, eight indicated acceptance of the individual null hypotheses and two indicated rejection of the individual null hypotheses. Therefore, results indicate minimal support for Hypothesis 2.

Hypothesis 3. *Among the women enrolled in a commercial weight loss program, there will be a relationship between body cathexis and current clothing behavior.*

The questionnaire items that were used included those related to body cathexis (items 1-16) and current clothing behavior (items 26-48). Gamma was used to determine the relationship between the variables. The current clothing behavior items were paired with body cathexis items according to body part (see Table 3). For example, clothing behavior items 41-43 that dealt with sleeve coverage were tested against item 12 that referred to satisfaction or dissatisfaction with the arm. This test was repeated for each body area included in the body cathexis subscale. All rejection levels were set at the .05 significance level.

Facial Features. Current clothing behavior items that were paired with the body cathexis score for facial features were items 28 and 29 (wearing dark colored clothing and wearing bright colored clothing).

Dark colored clothing. It was expected that those who were more satisfied with the face would indicate they wore dark colored clothing (item 28) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test ($\gamma = .001$, $p = .501$) indicated that there was no

relationship between satisfaction with the face and wearing dark colored clothing; therefore, the null hypothesis was accepted.

Bright colored clothing. It was expected that those who were more satisfied with the face would indicate they wore bright colored clothing (item 29) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = -.098, p = .731) indicated that there was no relationship between satisfaction with the face and wearing bright colored clothing; therefore, the null hypothesis was accepted.

Complexion. Current clothing behavior items that were paired with the body cathexis score for complexion were items 28 and 29 (wearing dark colored clothing and wearing bright colored clothing).

Dark colored clothing. It was expected that those who were more satisfied with their complexion would indicate they wore dark colored clothing (item 28) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.047, p = .346) indicated that there was no relationship between satisfaction with the complexion and wearing dark colored clothing; therefore, the null hypothesis was accepted.

Bright colored clothing. It was expected that those who were more satisfied with their complexion would indicate they wore bright colored clothing (item 29) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .168, p = .075) indicated that there was no relationship between satisfaction with the complexion and wearing bright colored clothing; therefore, the null hypothesis was accepted.

Hips. Current clothing behavior items that were paired with the body cathexis score for hips were items 30 and 31 (wearing flat front pants and wearing pleated front pants), items 32 and 33 (wearing unfitted dresses and wearing fitted dresses), items 36 and 37 (wearing straight skirts and wearing full skirts), and item 48 (wearing shirts, blouses, or sweaters that cover the buttocks and hips).

Flat front pants. It was expected that those who were more satisfied with the hips would indicate they wore flat front pants (item 30) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was

$\gamma > 0$. The results of the test ($\gamma = -.106$, $p = .8435$) indicated that there was no relationship between satisfaction with the hips and wearing flat front pants; therefore, the null hypothesis was accepted.

Pleated front pants. It was expected that those who were more satisfied with the hips would indicate they wore pleated front pants (item 31) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test ($\gamma = .123$, $p = .8835$) indicated that there was no relationship between satisfaction with the hips and wearing pleated front pants; therefore, the null hypothesis was accepted.

Unfitted dresses. It was expected that those who were more satisfied with the hips would indicate they wore unfitted dresses (item 32) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test ($\gamma = -.147$, $p = .068$) indicated that there was no relationship between satisfaction with the hips and wearing unfitted dresses; therefore, the null hypothesis was accepted.

Fitted dresses. It was expected that those who were more satisfied with the hips would indicate they wore fitted dresses (item 33) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .178$, $p = .0425$) indicated that there was a positive relationship between satisfaction with the hips and wearing fitted dresses; therefore, the null hypothesis was rejected. Results indicated that those who were less satisfied with the hips stated they wore fitted dresses with less frequency, in accordance with the alternate hypothesis. Table 14 shows a pattern in which the frequency of responses for “Very Dissatisfied” and “Dissatisfied” is higher for wearing fitted dresses “Rarely” or “Never” than for other areas of the table.

Straight skirts. It was expected that those who were more satisfied with the hips would indicate they wore straight skirts (item 36) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .187$, $p = .0255$) indicated that there was a positive relationship between satisfaction with the hips and wearing straight skirts; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were more satisfied with the hips stated they wore straight skirts with more frequency, in accordance with the alternate hypothesis (see Table 15).

Table 14

Frequency counts for satisfaction with hips and wearing fitted dresses

Degree of Satisfaction With Hips	Wearing Fitted Dresses					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	12	12	8	8	1	41
Dissatisfied	11	25	33	13	1	83
Satisfied	7	9	13	10	2	41
Very Satisfied	1	0	2	0	1	4
Total	31	46	56	31	5	169

Table 15

Frequency counts for satisfaction with hips and wearing straight skirts

Degree of Satisfaction With Hips	Wearing Straight Skirts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	4	9	13	12	3	41
Dissatisfied	6	16	33	23	5	83
Satisfied	0	5	19	14	4	42
Very Satisfied	0	0	1	3	0	4
Total	10	30	66	52	12	170

Full skirts. It was expected that those who were more satisfied with the hips would indicate they wore full skirts (item 37) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.177, p = .0345) indicated that there was a negative relationship between satisfaction with the hips and wearing full skirts; therefore, the null hypothesis was rejected. An

examination of the frequency of respondents indicated respondents who were more satisfied stated they wore full skirts with less frequency, in accordance with the alternate hypothesis (see Table 16).

Table 16

Frequency counts for satisfaction with hips and wearing full skirts

Degree of Satisfaction With Hips	Wearing Full Skirts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	7	8	11	9	5	40
Dissatisfied	17	19	30	15	2	83
Satisfied	10	9	16	6	0	41
Very Satisfied	1	2	0	1	0	4
Total	35	38	57	31	7	168

Lower torso coverage. It was expected that those who were more satisfied with the hips would indicate they wore shirts, blouses, or sweaters that cover the buttocks and hips (item 48) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.167, p = .038) indicated that there was a negative relationship between satisfaction with the hips and wearing shirts, blouses, or sweaters that cover the buttocks and hips; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were more satisfied with the hips stated they wore tops that cover the buttocks and hips with less frequency, in accordance with the alternate hypothesis. Table 17 shows a pattern in which the frequency of responses for “Satisfied” and “Very Dissatisfied” is lower for wearing tops that cover the lower torso “Always” or “Most of the Time” than for other areas of the table.

Thighs. Current clothing behavior items that were paired with the body cathexis score for thighs were items 30 and 31 (wearing flat front pants and wearing pleated front pants), items 32 and 33 (wearing unfitted dresses and wearing fitted dresses), and items 36 and 37 (wearing straight skirts and wearing full skirts).

Flat front pants. It was expected that those who were more satisfied with the thighs would indicate they wore flat front pants (item 30) with more frequency than those who were

Table 17

Frequency counts for satisfaction with hips and wearing tops that cover lower torso

Degree of Satisfaction With Hips	Lower Torso Coverage					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	4	9	16	7	3	39
Dissatisfied	9	20	32	18	5	84
Satisfied	4	18	11	8	0	41
Very Satisfied	1	1	2	0	0	4
Total	18	48	61	33	8	168

less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = -.151, p = .921) indicated that there was not a relationship between satisfaction with the thighs and wearing flat front pants; therefore, the null hypothesis was accepted.

Pleated front pants. It was expected that those who were more satisfied with the thighs would indicate they wore pleated front pants (item 31) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = .184, p = .9585) indicated that there was not a relationship between satisfaction with the thighs and wearing pleated front pants; therefore, the null hypothesis was accepted.

Unfitted dresses. It was expected that those who were more satisfied with the thighs would indicate they wore unfitted dresses (item 32) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.158, p = .0605) indicated that there was no relationship between satisfaction with the thighs and wearing unfitted dresses; therefore, the null hypothesis was accepted.

Fitted dresses. It was expected that those who were more satisfied with the thighs would indicate they wore fitted dresses (item 33) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was

$\gamma > 0$. The results of the test ($\gamma = .178$, $p = .0405$) indicated that there was a positive relationship between satisfaction with the thighs and fitted dresses; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the thighs stated they wore fitted dresses with less frequency, in accordance with the alternate hypothesis (see Table 18).

Table 18

Frequency counts for satisfaction with thighs and wearing fitted dresses

Degree of Satisfaction With Thighs	Wearing Fitted Dresses					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	12	15	10	7	1	45
Dissatisfied	15	25	35	20	3	98
Satisfied	4	5	10	4	0	23
Very Satisfied	0	1	1	0	1	3
Total	31	46	56	31	5	169

Straight skirts. It was expected that those who were more satisfied with the thighs would indicate they wore straight skirts (item 36) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .123$, $p = .1085$) indicated that there was no relationship between satisfaction with the thighs and wearing straight skirts; therefore, the null hypothesis was accepted.

Full skirts. It was expected that those who were more satisfied with the thighs would indicate they wore full skirts (item 37) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test ($\gamma = -.149$, $p = .074$) indicated that there was no relationship between satisfaction with the thighs and wearing full skirts; therefore, the null hypothesis was accepted.

Buttocks. Current clothing behavior items that were paired with the body cathexis score for buttocks were items 32 and 33 (wearing unfitted dresses and wearing fitted dresses), items 44 and 45 (wearing shirts, blouses, or sweaters tucked in and wearing shirts, blouses, or

sweaters untucked), and item 48 (wearing shirts, blouses, or sweaters that cover the buttocks and hips).

Unfitted dresses. It was expected that those who were more satisfied with the buttocks would indicate they wore unfitted dresses (item 32) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.154, p = .0505) indicated that there was no relationship between satisfaction with the buttocks and wearing unfitted dresses; therefore, the null hypothesis was accepted.

Fitted dresses. It was expected that those who were more satisfied with the buttocks would indicate they wore fitted dresses (item 33) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .115, p = .11) indicated that there was no relationship between satisfaction with the buttocks and wearing fitted dresses; therefore, the null hypothesis was accepted.

Tucked in. It was expected that those who were more satisfied with the buttocks would indicate they wore shirts, blouses, or sweaters tucked in (item 44) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .167, p = .0465) indicated that there was a positive relationship between satisfaction with the buttocks and wearing shirts, blouses, or sweaters tucked; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the buttocks stated they wore tops tucked in with less frequency, in accordance with the alternate hypothesis (see Table 19).

Untucked. It was expected that those who were more satisfied with the buttocks would indicate they wore shirts, blouses, or sweaters untucked (item 45) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.123, p = .1175) indicated that there was no relationship between satisfaction with the buttocks and wearing shirts, blouses, or sweaters untucked; therefore, the null hypothesis was accepted.

Lower torso coverage. It was expected that those who were more satisfied with the buttocks would indicate they wore shirts, blouses, or sweaters that cover the buttocks and hips (item 48) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.188,

p = .028) indicated that there was a negative relationship between satisfaction with the buttocks and wearing shirts, blouses, or sweaters that cover the buttocks and hips; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were more satisfied with the buttocks stated they wore tops that cover the buttocks and hips with less frequency, in accordance with the alternate hypothesis (see Table 20).

Table 19

Frequency counts for satisfaction with buttocks and wearing tops tucked in

Degree of Satisfaction With Buttocks	Wearing Tucked In Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	17	10	13	2	2	44
Dissatisfied	18	24	31	9	1	83
Satisfied	9	12	10	8	0	39
Very Satisfied	0	2	0	2	0	4
Total	44	48	54	21	3	170

Table 20

Frequency counts for satisfaction with buttocks and wearing tops that cover lower torso

Degree of Satisfaction With Buttocks	Lower Torso Coverage					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	4	7	16	11	4	42
Dissatisfied	10	25	32	13	3	83
Satisfied	3	13	13	9	1	39
Very Satisfied	1	3	0	0	0	4
Total	18	48	61	33	8	168

Legs. Current clothing behavior items that were paired with the body cathexis score for legs were items 34 and 35 (wearing above knee length skirts and wearing below knee length skirts).

Short skirts. It was expected that those who were more satisfied with the legs would indicate they wore skirts that were above knee length (item 34) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .140$, $p = .0965$) indicated that there was not a relationship between satisfaction with the legs and wearing skirts that were above knee length; therefore, the null hypothesis was accepted.

Long skirts. It was expected that those who were more satisfied with the legs would indicate they wore skirts that were below knee length (item 35) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test ($\gamma = -.179$, $p = .046$) indicated that there was a negative relationship between satisfaction with the legs and wearing skirts that were below knee length; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the legs stated they wore long skirts with more frequency, in accordance with the alternate hypothesis (see Table 21).

Table 21

Frequency counts for satisfaction with legs and wearing long skirts

Degree of Satisfaction With Legs	Wearing Long Skirts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	1	2	6	8	9	26
Dissatisfied	5	7	20	42	18	92
Satisfied	3	6	10	15	9	43
Very Satisfied	2	2	0	2	1	7
Total	11	17	36	67	37	168

Waist. Current clothing behavior items that were paired with the body cathexis score for waist were items 38 and 39 (wearing pants and skirts with a full or partial elastic waist and wearing pants and skirts with a waistband), item 40 (wearing a belt with pants and skirt), and

items 44-45 (wearing shirts, blouses, or sweaters tucked in and wearing shirts, blouses, or sweaters untucked).

Elastic waist. It was expected that those who were more satisfied with the waist would indicate they wore pants and skirts with a full or partial elastic waist (item 38) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.196, p = .023) indicated that there was a negative relationship between satisfaction with the waist and wearing pants and skirts with a full or partial elastic waist; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were more satisfied with the waist stated they wore elastic waist pants and skirts with less frequency, in accordance with the alternate hypothesis (see Table 22).

Table 22

Frequency counts for satisfaction with waist and wearing elastic waist pants and skirts

Degree of Satisfaction With Waist	Wearing Elastic Waist					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	8	9	17	8	5	47
Dissatisfied	16	23	30	12	4	85
Satisfied	8	11	10	5	0	34
Very Satisfied	2	0	0	1	0	3
Total	34	43	57	26	9	169

Waistband. It was expected that those who were more satisfied with the waist would indicate they wore pants and skirts with a waistband (item 39) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .123, p = .095) indicated that there was not a relationship between satisfaction with the waist and wearing pants and skirts with a waistband; therefore, the null hypothesis was accepted.

Belt. It was expected that those who were more satisfied with the waist would indicate they wore a belt with pants and skirts (item 40) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was

$\gamma > 0$. The results of the test ($\gamma = .317$, $p = .000$) indicated that there was a positive relationship between satisfaction with the waist and wearing belts with pants and skirts; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the waist stated they wore belts with pants and skirts with less frequency, in accordance with the alternate hypothesis (see Table 23).

Table 23

Frequency counts for satisfaction with waist and wearing a belt with pants and skirts

Degree of Satisfaction With Waist	Wearing Belts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	20	14	7	6	0	47
Dissatisfied	19	23	24	14	4	84
Satisfied	5	10	10	6	3	34
Very Satisfied	0	1	1	0	1	3
Total	44	48	42	26	8	168

Tucked in. It was expected that those who were more satisfied with the waist would indicate they wore shirts, blouses, or sweaters tucked in (item 44) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .344$, $p = .000$) indicated that there was a positive relationship between satisfaction with the waist and wearing shirts, blouses, or sweaters tucked in; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the waist stated they wore tops that were tucked in with less frequency, in accordance with the alternate hypothesis (see Table 24).

Untucked. It was expected that those who were more satisfied with the waist would indicate they wore shirts, blouses, or sweaters untucked (item 45) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test ($\gamma = -.371$, $p = .000$) indicated that there was a negative relationship between satisfaction with the waist and wearing shirts, blouses, or

sweaters untucked; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the waist stated they wore tops that were untucked with more frequency, in accordance with the alternate hypothesis (see Table 25).

Table 24

Frequency counts for satisfaction with waist and wearing tops tucked in

Degree of Satisfaction With Waist	Wearing Tucked In Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	18	14	10	2	2	46
Dissatisfied	20	25	32	8	0	85
Satisfied	5	8	10	11	0	34
Very Satisfied	0	1	1	0	1	3
Total	43	48	53	21	3	168

Table 25

Frequency counts for satisfaction with waist and wearing tops untucked

Degree of Satisfaction With Waist	Wearing Untucked Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	2	0	9	17	18	46
Dissatisfied	0	5	33	26	20	84
Satisfied	0	6	15	8	5	34
Very Satisfied	0	0	2	1	0	3
Total	2	11	59	52	43	167

Stomach or abdomen. Current clothing behavior items that were paired with the body cathexis score for stomach or abdomen were items 30 and 31 (wearing flat front pants and wearing pleated front pants), items 32 and 33 (wearing unfitted dresses and wearing fitted dresses), items 36 and 37 (wearing straight skirts and wearing full skirts), items 38 and 39 (wearing pants and skirts with a full or partial elastic waist and wearing pants and skirts with a waistband), item 40 (wearing a belt with pants and skirt), and items 44-45 (wearing shirts, blouses, or sweaters tucked in and wearing shirts, blouses, or sweaters untucked).

Flat front pants. It was expected that those who were more satisfied with the stomach or abdomen would indicate they wore flat front pants (item 30) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = -.167, p = .9395) indicated that there was not a relationship between satisfaction with the stomach or abdomen and wearing flat front pants; therefore, the null hypothesis was accepted.

Pleated front pants. It was expected that those who were more satisfied with the stomach or abdomen would indicate they wore pleated front pants (item 31) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = .208, p = .972) indicated that there was not a relationship between satisfaction with the stomach or abdomen and wearing pleated front pants; therefore, the null hypothesis was accepted.

Unfitted dresses. It was expected that those who were more satisfied with the stomach or abdomen would indicate they wore unfitted dresses (item 32) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ =- .368, p = .000) indicated that there was a negative relationship between satisfaction with the stomach or abdomen and wearing unfitted dresses; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the stomach or abdomen stated they wore unfitted dresses with more frequency, in accordance with the alternate hypothesis (see Table 26).

Fitted dresses. It was expected that those who were more satisfied with the stomach or abdomen would indicate they wore fitted dresses (item 33) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .236, p = .009) indicated that there was a positive relationship between satisfaction with the stomach or abdomen and wearing fitted

dresses; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the stomach or abdomen stated they wore fitted dresses with less frequency, in accordance with the alternate hypothesis (see Table 27).

Table 26

Frequency counts for satisfaction with stomach or abdomen and wearing unfitted dresses

Degree of Satisfaction With Stomach	Wearing Unfitted Dresses					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	3	8	23	23	12	69
Dissatisfied	11	14	26	28	3	82
Satisfied	2	4	4	2	0	12
Very Satisfied	0	2	2	0	0	4
Total	16	28	55	53	15	167

Table 27

Frequency counts for satisfaction with stomach or abdomen and wearing fitted dresses

Degree of Satisfaction With Stomach	Wearing Fitted Dresses					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	17	20	21	11	0	69
Dissatisfied	13	20	29	17	3	82
Satisfied	1	4	3	3	1	12
Very Satisfied	0	1	2	0	1	4
Total	31	45	55	31	5	167

Straight skirts. It was expected that those who were more satisfied with the stomach or abdomen would indicate they wore straight skirts (item 36) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .095$, $p = .182$) indicated that there was not a relationship between satisfaction with the stomach or abdomen and wearing straight skirts; therefore, the null hypothesis was accepted.

Full skirts. It was expected that those who were more satisfied with the stomach or abdomen would indicate they wore full skirts (item 37) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test ($\gamma = -.092$, $p = .188$) indicated that there was not a relationship between satisfaction with the stomach or abdomen and wearing full skirts; therefore, the null hypothesis was accepted.

Elastic waist. It was expected that those who were more satisfied with the stomach or abdomen would indicate they wore pants and skirts with a full or partial elastic waist (item 38) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test ($\gamma = -.184$, $p = .034$) indicated that there was a negative relationship between satisfaction with the stomach or abdomen and wearing pants and skirts with a full or partial elastic waist; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the stomach or abdomen stated they wore elastic waist pants and skirts with more frequency, in accordance with the alternate hypothesis (see Table 28.

Waistband. It was expected that those who were more satisfied with the stomach or abdomen would indicate they wore pants and skirts with a waistband (item 39) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .114$, $p = .133$) indicated that there was not a relationship between satisfaction with the stomach or abdomen and wearing pants and skirts with a waistband; therefore, the null hypothesis was accepted.

Belt. It was expected that those who were more satisfied with the stomach or abdomen would indicate they wore a belt with pants and skirts (item 40) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .315$, $p = .000$) indicated that there was a positive relationship between satisfaction with the stomach or abdomen and wearing belts with pants and skirts; therefore, the null hypothesis was rejected. An examination of the frequency of

responses indicated respondents who were less satisfied with the stomach or abdomen stated they wore belts with pants and skirts less frequency, in accordance with the alternate hypothesis (see Table 29).

Table 28

Frequency counts for satisfaction with stomach or abdomen and wearing elastic waist pants and skirts

Degree of Satisfaction With Stomach	Wearing Elastic Waist					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	3	17	21	11	7	69
Dissatisfied	17	17	33	15	2	84
Satisfied	2	7	2	1	0	12
Very Satisfied	3	1	0	0	0	4
Total	35	42	56	27	9	169

Table 29

Frequency counts for satisfaction with stomach or abdomen and wearing a belt with pants and skirts

Degree of Satisfaction With Stomach	Wearing Belts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	26	18	15	9	0	68
Dissatisfied	17	28	22	12	5	84
Satisfied	1	3	4	3	1	12
Very Satisfied	0	0	1	1	2	4
Total	44	49	42	25	8	168

Tucked in. It was expected that those who were more satisfied with the stomach or abdomen would indicate they wore shirts, blouses, or sweaters tucked in (item 44) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .361, p = .000) indicated that there was a positive relationship between satisfaction with the stomach or abdomen and wearing shirts, blouses, or sweaters tucked in; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the stomach or abdomen stated they wore tops that were tucked in with less frequency, in accordance with the alternate hypothesis (see Table 30).

Table 30

Frequency counts for satisfaction with stomach or abdomen and wearing tucked in tops

Degree of Satisfaction With Stomach	Wearing Tucked In Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	24	22	17	3	2	68
Dissatisfied	19	21	33	11	0	84
Satisfied	1	4	1	6	0	12
Very Satisfied	0	1	1	1	1	4
Total	44	48	52	21	3	168

Untucked. It was expected that those who were more satisfied with the stomach or abdomen would indicate they wore shirts, blouses, or sweaters untucked (item 45) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.369, p = .000) indicated that there was a positive relationship between satisfaction with the stomach or abdomen and wearing shirts, blouses, or sweaters untucked; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the stomach or abdomen stated they wore tops that were untucked with more frequency, in accordance with the alternate hypothesis (see Table 31).

Table 31

Frequency counts for satisfaction with stomach or abdomen and wearing untucked tops

Degree of Satisfaction With Stomach	Wearing Untucked Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	2	2	15	23	25	67
Dissatisfied	0	5	37	24	18	84
Satisfied	0	4	2	5	1	12
Very Satisfied	0	0	4	0	0	4
Total	2	11	58	52	44	167

Bust or breasts. Current clothing behavior items that were paired with the body cathexis score for busts or breasts were items 44-45 (wearing shirts, blouses, or sweaters tucked in and wearing shirts, blouses, or sweaters untucked) and items 46-47 (wearing shirts, blouses, or sweaters that were close-fitting and wearing shirts, blouses, or sweaters that were loose-fitting).

Tucked in. It was expected that those who were more satisfied with the bust or breasts would indicate they wore shirts, blouses, or sweaters tucked in (item 44) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .050$, $p = .321$) indicated that there was not a relationship between satisfaction with the bust or breasts and wearing shirts, blouses, or sweaters tucked; therefore, the null hypothesis was accepted.

Untucked. It was expected that those who were more satisfied with the bust or breasts would indicate they wore shirts, blouses, or sweaters untucked (item 45) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test ($\gamma = -.066$, $p = .2785$) indicated that there was not a relationship between satisfaction with the bust or breasts and wearing shirts, blouses, or sweaters untucked; therefore, the null hypothesis was accepted.

Close-fitting tops. It was expected that those who were more satisfied with the bust or breasts would indicate they wore shirts, blouses, or sweaters that were close-fitting (item 46) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .022$,

p = .4255) indicated that there was not a relationship between satisfaction with the bust or breasts and wearing shirts, blouses, or sweaters that were close-fitting; therefore, the null hypothesis was accepted.

Loose-fitting tops. It was expected that those who were more satisfied with the bust or breasts would indicate they wore shirts, blouses, or sweaters that were loose-fitting (item 47) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.090, p = .2245) indicated that there was not a relationship between satisfaction with the bust or breasts and wearing shirts, blouses, or sweaters that were loose-fitting; therefore, the null hypothesis was accepted.

Shoulders. The current clothing behavior item that was paired with the body cathexis score for shoulders was item 43 (wearing shirts, blouses, or sweaters that were sleeveless). It was expected that those who were more satisfied with the shoulders would indicate they wore shirts, blouses, or sweaters that were sleeveless with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .242, p = .0205) indicated that there was a positive relationship between satisfaction with the shoulders and wearing shirts, blouses, or sweaters that were sleeveless; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the shoulders stated they wore sleeveless tops with less frequency, in accordance with the alternate hypothesis (see Table 32).

Table 32

Frequency counts for satisfaction with shoulders and wearing sleeveless tops

Degree of Satisfaction With Shoulders	Wearing Sleeveless Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	3	2	1	0	0	6
Dissatisfied	11	18	11	2	0	42
Satisfied	24	39	48	0	0	111
Very Satisfied	1	4	5	0	1	11
Total	39	63	65	2	1	170

Arms. Current clothing behavior items that were paired with the body cathexis score for arms were items 41-43 (wearing shirts, blouses, or sweaters that were long sleeved; wearing shirts, blouses, or sweaters that were short sleeved; and wearing shirts, blouses, or sweaters that were sleeveless).

Long sleeved tops. It was expected that those who were more satisfied with the arms would indicate they wore shirts, blouses, or sweaters that were long sleeved (item 41) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test ($\gamma = .033$, $p = .5895$) indicated that there was not a relationship between satisfaction with the arms and wearing shirts, blouses, or sweaters that were long sleeved; therefore, the null hypothesis was accepted.

Short sleeved tops. It was expected that those who were more satisfied with the arms would indicate they wore shirts, blouses, or sweaters that were short sleeved (item 42) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .076$, $p = .321$) indicated that there was not a relationship between satisfaction with the arms and wearing shirts, blouses, or sweaters that were short sleeved; therefore, the null hypothesis was accepted.

Sleeveless tops. It was expected that those who were more satisfied with the arms would indicate they wore shirts, blouses, or sweaters that were sleeveless (item 43) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .322$, $p = .002$) indicated that there was a positive relationship between satisfaction with the arms and wearing shirts, blouses, or sweaters that were sleeveless; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with the arms stated they wore sleeveless tops with less frequency, in accordance with the alternate hypothesis (see Table 33).

Muscle tone. The current clothing behavior item that was paired with the body cathexis score for muscle tone was item 43 (wearing shirts, blouses, or sweaters that were sleeveless). It was expected that those who were more satisfied with muscle tone would indicate they wore shirts, blouses, or sweaters that were sleeveless with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .252$, $p = .014$) indicated that there was a positive relationship between satisfaction with muscle tone and wearing shirts, blouses, or sweaters that were sleeveless; therefore, the null hypothesis was rejected. An examination of the frequency of

responses indicated respondents who were less satisfied with muscle tone stated they wore sleeveless tops with less frequency, in accordance with the alternate hypothesis (see Table 34).

Table 33

Frequency counts for satisfaction with arms and wearing sleeveless tops

Degree of Satisfaction With Arms	Wearing Sleeveless Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	7	3	1	1	0	12
Dissatisfied	19	40	27	1	0	87
Satisfied	12	17	33	0	0	62
Very Satisfied	1	3	3	0	1	8
Total	39	63	64	2	1	169

Table 34

Frequency counts for satisfaction with muscle tone and wearing sleeveless tops

Degree of Satisfaction With Muscle Tone	Wearing Sleeveless Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	12	9	6	1	0	28
Dissatisfied	19	41	39	1	0	100
Satisfied	8	11	17	0	0	36
Very Satisfied	0	2	2	0	1	5
Total	39	63	64	2	1	169

Weight. Current clothing behavior items that were paired with the body cathexis score for weight were items 26-27 (wearing loose fitting clothing and wearing tight fitting clothing), items 28-29 (wearing dark colored clothing and wearing bright colored clothing), items 34-35 (wearing above knee length skirts and wearing below knee length skirts), and items 46-47 (wearing

shirts, blouses, or sweaters that were close-fitting and wearing shirts, blouses, or sweaters that were loose-fitting).

Loose fitting clothing. It was expected that those who were more satisfied with weight would indicate they wore clothing that was loose fitting (item 26) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.220, p = .0185) indicated that there was a negative relationship between satisfaction with weight and wearing clothing that was loose fitting; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with their weight stated they wore loose fitting clothing with more frequency, in accordance with the alternate hypothesis (see Table 35).

Table 35

Frequency counts for satisfaction with weight and wearing loose fitting clothing

Degree of Satisfaction With Weight	Wearing Loose Fitting Clothing					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	0	4	20	18	12	54
Dissatisfied	1	9	36	33	7	86
Satisfied	0	5	10	10	1	26
Very Satisfied	0	0	1	1	0	2
Total	1	18	67	62	20	168

Tight fitting clothing. It was expected that those who were more satisfied with weight would indicate they wore clothing that was tight fitting (item 27) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .275, p = .0015) indicated that there was a positive relationship between satisfaction with weight and wearing clothing that was tight fitting; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with their weight stated they wore tight fitting clothing with less frequency, in accordance with the alternate hypothesis (see Table 36).

Table 36

Frequency counts for satisfaction with weight and wearing tight fitting clothing

Degree of Satisfaction With Weight	Wearing Tight Fitting Clothing					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	14	25	13	1	1	54
Dissatisfied	13	27	32	12	2	86
Satisfied	3	11	11	1	0	26
Very Satisfied	0	0	1	1	0	2
Total	30	63	57	15	3	168

Dark colored clothing. It was expected that those who were more satisfied with weight would indicate they wore dark colored clothing (item 28) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.071, p = .2645) indicated that there was not a relationship between satisfaction with weight and wearing dark colored clothing; therefore, the null hypothesis was accepted.

Bright colored clothing. It was expected that those who were more satisfied with weight would indicate they wore bright colored clothing (item 29) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = -.005, p = .5185) indicated that there was not a relationship between satisfaction with weight and wearing bright colored clothing; therefore, the null hypothesis was accepted.

Short skirts. It was expected that those who were more satisfied with weight would indicate they wore skirts that were above knee length (item 34) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .239, p = .0115) indicated that there was a positive relationship between satisfaction with weight and wearing skirts that were above knee length; therefore, the null hypothesis was rejected. An examination of the frequency of

responses indicated respondents who were less satisfied with their weight stated they wore short skirts with less frequency, in accordance with the alternate hypothesis (see Table 37).

Table 37

Frequency counts for satisfaction with weight and wearing short skirts

Degree of Satisfaction With Weight	Wearing Short Skirts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	20	18	8	5	2	53
Dissatisfied	21	31	26	7	1	86
Satisfied	5	9	7	4	1	26
Very Satisfied	0	0	0	1	1	2
Total	46	58	41	17	5	167

Long skirts. It was expected that those who were more satisfied with weight would indicate they wore skirts that were below knee length (item 35) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.105, p = .171) indicated that there was not a relationship between satisfaction weight and wearing skirts that were below knee length; therefore, the null hypothesis was accepted.

Close-fitting tops. It was expected that those who were more satisfied with weight would indicate they wore shirts, blouses, or sweaters that were close-fitting (item 46) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .214, p = .0265) indicated that there was a positive relationship between satisfaction with weight and wearing shirts, blouses, or sweaters that were close-fitting; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with their weight stated they wore close-fitting tops with less frequency, in accordance with the alternate hypothesis (see Table 38).

Table 38

Frequency counts for satisfaction with weight and wearing close-fitting tops

Degree of Satisfaction With Weight	Wearing Close-fitting Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	10	14	25	3	1	53
Dissatisfied	2	31	40	13	0	86
Satisfied	0	10	10	6	0	26
Very Satisfied	0	1	0	1	0	2
Total	12	56	75	23	1	167

Loose-fitting tops. It was expected that those who were more satisfied with weight would indicate they wore shirts, blouses, or sweaters that were loose-fitting (item 47) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.386, p = .0005) indicated that there was a negative relationship between satisfaction with weight and wearing shirts, blouses, or sweaters that were loose-fitting; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated respondents who were less satisfied with their weight stated they wore loose-fitting tops with more frequency, in accordance with the alternate hypothesis (see Table 39).

Overall appearance. Current clothing behavior items that were paired with the body cathexis score for overall appearance were items 26-27 (wearing loose fitting clothing and wearing tight fitting clothing) and items 28-29 (wearing dark colored clothing and wearing bright colored clothing).

Loose fitting clothing. It was expected that those who were more satisfied with overall appearance would indicate they wore clothing that was loose fitting (item 26) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.086, p = .229) indicated that there was not a relationship between satisfaction with overall appearance and wearing clothing that was loose fitting; therefore, the null hypothesis was accepted.

Tight fitting clothing. It was expected that those who were more satisfied with overall appearance would indicate they wore clothing that was tight fitting (item 27) with more

Table 39

Frequency counts for satisfaction with weight and wearing loose-fitting tops

Degree of Satisfaction With Weight	Wearing Loose-fitting Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Very Dissatisfied	0	1	25	16	11	53
Dissatisfied	0	6	48	30	2	86
Satisfied	0	6	13	7	0	26
Very Satisfied	0	1	0	1	0	2
Total	0	14	86	54	13	167

frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .048, p = .334) indicated that there was not a relationship between satisfaction with overall appearance and wearing clothing that was tight fitting; therefore, the null hypothesis was accepted.

Dark colored clothing. It was expected that those who were more satisfied with overall appearance would indicate they wore dark colored clothing (item 28) with less frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.197, p = .056) indicated that there was not a relationship between satisfaction with overall appearance and wearing dark colored clothing; therefore, the null hypothesis was accepted.

Bright colored clothing. It was expected that those who were more satisfied with overall appearance would indicate they wore bright colored clothing (item 29) with more frequency than those who were less satisfied. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .074, p = .279) indicated that there was not a relationship between satisfaction with overall appearance and wearing bright colored clothing; therefore, the null hypothesis was accepted.

Summary of Hypothesis 3. This hypothesis tested the relationship between body cathexis and current clothing behavior. Table 40 shows the test results for Hypothesis 3.

Table 40

Test results for Hypothesis 3

Test	**Test Statistic (γ)**	**P-value**
Satisfaction with face		
and wearing dark colored clothing	.001	.501
and wearing bright colored clothing	-.098	.731
Satisfaction with complexion		
and wearing dark colored clothing	-.047	.346
and wearing bright colored clothing	.168	.075
Satisfaction with hips		
and wearing flat front pants	-.106	.8435
and wearing pleated front pants	.123	.8835
and wearing unfitted dresses	-.147	.068
and wearing fitted dresses	.178	.0425*
and wearing straight skirts	.187	.0255*
and wearing full skirts	-.177	.0345*
and wearing tops that cover lower torso	-.167	.038*
Satisfaction with thighs		
and wearing flat front pants	-.151	.921
and wearing pleated front pants	.184	.9585
and wearing unfitted dresses	-.158	.0605
and wearing fitted dresses	.178	.0405*
and wearing straight skirts	.123	.1085
and wearing full skirts	-.149	.074
Satisfaction with buttocks		
and wearing unfitted dresses	-.154	.0505
and wearing fitted dresses	.115	.11
and wearing tops tucked in	.167	.0465*
and wearing tops untucked	-.123	.1175
and wearing tops that cover lower torso	-.188	.028*
Satisfaction with legs		
and wearing short skirts	.140	.0965
and wearing long skirts	-.179	.046*

Test	Test Statistic (γ)	P-value
Satisfaction with waist		
and wearing pants and skirts with elastic waist	-.196	.023*
and wearing pants and skirts with a waistband	.123	.095
and wearing belts with pants and skirts	.317	.000*
and wearing tops tucked in	.344	.000*
and wearing tops untucked	-.371	.000*
Satisfaction with stomach or abdomen		
and wearing flat front pants	-.167	.9395
and wearing pleated front pants	.208	.972
and wearing unfitted dresses	-.368	.000*
and wearing fitted dresses	.236	.009*
and wearing straight skirts	.095	.182
and wearing full skirts	-.092	.188
and wearing pants and skirts with elastic waist	-.184	.034*
and wearing pants and skirts with a waistband	.114	.133
and wearing belts with pants and skirts	.357	.000*
and wearing tops tucked in	.361	.000*
and wearing tops untucked	-.369	.000*
Satisfaction with bust or breasts		
and wearing tops tucked in	.050	.321
and wearing tops untucked	-.066	.2785
and wearing close-fitting tops	.022	.4225
and wearing loose-fitting tops	-.090	.2245
Satisfaction with shoulders		
and wearing sleeveless tops	.242	.0205*
Satisfaction with arms		
and wearing long sleeved tops	.033	.5895
and wearing short sleeved tops	.076	.321
and wearing sleeveless tops	.322	.002*
Satisfaction with muscle tone		
and wearing sleeveless tops	.252	.014*

Test	Test Statistic (γ)	P-value
Satisfaction with weight		
and wearing loose fitting clothing	-.220	.0185*
and wearing tight fitting clothing	.275	.0015*
and wearing dark colored clothing	-.071	.2645
and wearing bright colored clothing	-.005	.5185
and wearing short skirts	.239	.0115*
and wearing long skirts	-.105	.171
and wearing close-fitting tops	.214	.0265*
and wearing loose-fitting tops	-.386	.0005*
Satisfaction with overall appearance		
and wearing loose fitting clothing	-.086	.229
and wearing tight fitting clothing	.048	.334
and wearing dark colored clothing	-.197	.056
and wearing bright colored clothing	.074	.279

Note: * = Significant at the .05 level.

The direction of the hypothesized relationship was dependent on the body area and the clothing behavior. For example, it was hypothesized that respondents who were more satisfied with their legs would indicate they wore short skirts with more frequency and long skirts with less frequency than those who were less satisfied. The results of the statistical testing indicated there were no relationships between clothing behavior and body cathexis scores for facial features, complexion, bust or breasts, and overall appearance. However, the results did reveal relationships between clothing behavior and body cathexis scores for hips, thighs, buttocks, legs, waist, stomach or abdomen, shoulders, arms, muscle tone, and weight.

Results indicated that respondents who were more satisfied with the hips currently wore straight skirts with more frequency and full skirts and tops that covered the lower torso with less frequency. Respondents who were less satisfied with the hips also wore fitted dresses with less frequency.

Less satisfaction with the thighs was related to wearing fitted dresses with less frequency, while less satisfaction with the legs was related to wearing long skirts with more frequency. Those who were less satisfied with the buttocks wore tops that were tucked in with less frequency, and those who were more satisfied with the buttocks wore tops that covered the buttocks and hips with less frequency.

When respondents were less satisfied with the waist area, they wore belts and tops that were tucked in with less frequency. Respondents with greater satisfaction for the waist wore elastic waist pants and skirts with less frequency. Those with lower satisfaction for the waist wore tops that were untucked with more frequency.

Respondents who indicated lower satisfaction with the stomach or abdomen stated they wore unfitted dresses, elastic waist pants and skirts, and untucked tops with more frequency. Respondents who were less satisfied with the stomach or abdomen also wore fitted dresses, belts with pants and skirts, and tucked in tops with less frequency.

Respondents who were less satisfied with the shoulders, arms, and muscle tone all wore sleeveless tops with less frequency. Those who were less satisfied with their weight wore loose fitting clothing and loose-fitting tops with more frequency. Respondent less satisfied with their weight also wore tight fitting clothing, short skirts, and close-fitting tops with more frequency

These findings correspond to the findings of Ogle (1999) who found that women used clothing to enhance body parts with which they were more satisfied. Out of the 61 tests conducted to examine the relationship between body cathexis and current clothing behavior, 35 indicated acceptance of the individual null hypotheses and 26 indicated rejection of the individual null hypotheses. Therefore, results indicate partial support for Hypothesis 3.

Hypothesis 4. *Among the women enrolled in a commercial weight loss program, there will be a relationship between created appearance and current clothing behavior.*

The questionnaire items that were used included those related to created appearance (item 20) and current clothing behavior (items 26-48). Wilcoxon's rank sum test was used to determine the relationship between the variables. For example, to test the scores for the waist area, the data were sorted into two groups: those who reported a noticeable weight loss in the waist area and those who did not. These two groups were then tested against clothing behaviors that corresponded to the waist area, such as item 40 (wearing a belt) and item 44 (wearing tops tucked in). This test was repeated for each body area included in item 20 (see Table 4). It should be noted that SPSS computes Z, the test variable for the Wilcoxon's rank sum test, in such a way that it is always negative. All rejection levels were set at the .05 significance level.

Face. The current clothing behavior items that were paired with having a noticeable weight loss in the face were items 28 and 29 (wearing dark colored clothing and wearing bright colored clothing).

Dark colored clothing. For item 28, wearing dark colored clothing, and a noticeable weight loss in the face, it was expected that those who reported they had a noticeable weight loss in the face would also indicate they wore dark colored clothing with less frequency than those who had not reported a noticeable weight loss in the face. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the Wilcoxon's rank sum test (Z = -.418, p = .338) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the face and wearing dark colored clothing.

Bright colored clothing. For item 29, wearing bright colored clothing, and a noticeable weight loss in the face, it was expected that those who had reported they had a noticeable weight loss in the face would also indicate they wore bright colored clothing with more frequency than those who had not reported a noticeable weight loss in the face. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test (Z = -1.647, p = .05) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Those with a noticeable weight loss in the face had a higher mean score for wearing bright colored clothing than those who did not have a noticeable weight loss in the face (see Table 41).

Table 41

Mean ranks for loss in face and wearing bright colored clothing

Noticeable Loss in Face	**N**	**Mean Ranks for Wearing Bright Colored Clothing**
Yes	78	92.01
No	93	80.96
Total	171	

Hips. The current clothing behavior items that were paired with having a noticeable weight loss in the hips were items 30 and 31 (wearing flat front pants and wearing pleated front pants), items 32 and 33 (wearing unfitted dresses and wearing fitted dresses), items 36 and 37 (wearing straight skirts and wearing full skirts), and item 48 (wearing shirts, blouses, or sweaters that cover the buttocks and hips).

Flat front pants. For item 30, wearing flat front pants, and a noticeable weight loss in the hips, it was expected that those who had reported they had a noticeable weight loss in the hips would also indicate they wore flat front pants with more frequency than those who had not reported a noticeable weight loss in the hips. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test (Z = -2.756, p = .997) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the hips and wearing flat front pants.

Pleated front pants. For item 31, wearing pleated front pants, and a noticeable weight loss in the hips, it was expected that those who reported they had a noticeable weight loss in the hips would also indicate they wore pleated front pants with less frequency than those who had not reported a noticeable weight loss in the hips. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test (Z = -2.897, p = .998) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the hips and wearing pleated front pants.

Unfitted dresses. For item 32, wearing unfitted dresses, and a noticeable weight loss in the hips, it was expected that those who reported they had a noticeable weight loss in the hips would also indicate they wore unfitted dresses with less frequency than those who had not reported a noticeable weight loss in the hips. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test (Z = -1.860, p = .0315) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Those with a noticeable weight loss in the hips had a higher mean score for wearing unfitted dresses than those who did not have a noticeable weight loss in the hips (see Table 42).

Table 42

Mean ranks for loss in hips and wearing unfitted dresses

Noticeable Loss in Hips	**N**	**Mean Ranks for Wearing Unfitted Dresses**
Yes	36	72.06
No	133	88.50
Total	169	

Fitted dresses. For item 33, wearing fitted dresses, and a noticeable weight loss in the hips, it was expected that those who had reported they had a noticeable weight loss in the hips would also indicate they wore fitted dresses with more frequency than those who had not reported a noticeable weight loss in the hips. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test (Z = -.808, p = .2095) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the hips and wearing fitted dresses.

Straight skirts. For item 36, wearing straight skirts, and a noticeable weight loss in the hips, it was expected that those who had reported they had a noticeable weight loss in the hips would also indicate they wore straight skirts with more frequency than those who had not reported a noticeable weight loss in the hips. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test (Z = -.485, p = .686) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the hips and wearing straight skirts.

Full skirts. For item 37, wearing full skirts, and a noticeable weight loss in the hips, it was expected that those who reported they had a noticeable weight loss in the hips would also indicate they wore full skirts with less frequency than those who had not reported a noticeable weight loss in the hips. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test (Z = -.744, p = .7715) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the hips and wearing full skirts.

Lower torso coverage. For item 48, wearing tops that cover the buttocks and hips, and a noticeable weight loss in the hips, it was expected that those who reported they had a noticeable weight loss in the hips would also indicate they wore shirts, blouses, or sweaters that cover the hips and buttocks with less frequency than those who had not reported a noticeable weight loss in the hips. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test (Z = -.405, p = .3425) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the hips and wearing shirts, blouses, or sweaters that cover the buttocks and hips.

Thighs. The current clothing behavior items that were paired with having a noticeable weight loss in the thighs were items 30 and 31 (wearing flat front pants and wearing pleated front pants), items 32 and 33 (wearing unfitted dresses and wearing fitted dresses), and items 36 and 37 (wearing straight skirts and wearing full skirts).

Flat front pants. For item 30, wearing flat front pants, and a noticeable weight loss in the thighs, it was expected that those who had reported they had a noticeable weight loss in the thighs would also indicate they wore flat front pants with more frequency than those who had not reported a noticeable weight loss in the thighs. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -.716$, $p = .237$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the thighs and wearing flat front pants.

Pleated front pants. For item 31, wearing pleated front pants, and a noticeable weight loss in the thighs, it was expected that those who reported they had a noticeable weight loss in the thighs would also indicate they wore pleated front pants with less frequency than those who had not reported a noticeable weight loss in the thighs. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test ($Z = -1.110$, $p = .1335$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the thighs and wearing pleated front pants with less frequency.

Unfitted dresses. For item 32, wearing unfitted dresses, and a noticeable weight loss in the thighs, it was expected that those who reported they had a noticeable weight loss in the thighs would also indicate they wore unfitted dresses with less frequency than those who had not reported a noticeable weight loss in the thighs. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test ($Z = -2.667$, $p = .004$) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Those with a noticeable weight loss in the thighs had a higher mean score for wearing unfitted dresses than those who did not have a noticeable weight loss in the thighs (see Table 43).

Table 43

Mean ranks for loss in thighs and wearing unfitted dresses

Noticeable loss in Thighs	N	Mean Ranks for Wearing Unfitted Dresses
Yes	24	61.27
No	145	88.93
Total	169	

Fitted dresses. For item 33, wearing fitted dresses, and a noticeable weight loss in the thighs, it was expected that those who had reported they had a noticeable weight loss in the thighs would also indicate they wore fitted dresses with more frequency than those who had not reported a noticeable weight loss in the thighs. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test (Z = -.323, p = .093) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the thighs and wearing fitted dresses.

Straight skirts. For item 36, wearing straight skirts, and a noticeable weight loss in the thighs, it was expected that those who had reported they had a noticeable weight loss in the thighs would also indicate they wore straight skirts with more frequency than those who had not reported a noticeable weight loss in the thighs. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test (Z = -.901, p = .184) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the thighs and wearing straight skirts.

Full skirts. For item 37, wearing full skirts, and a noticeable weight loss in the thighs, it was expected that those who reported they had a noticeable weight loss in the thighs would also indicate they wore full skirts with less frequency than those who had not reported a noticeable weight loss in the thighs. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test (Z = -.957, p = .1695) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the thighs and wearing full skirts.

Buttocks. The current clothing behavior items that were paired with having a noticeable weight loss in the buttocks were items 32 and 33 (wearing unfitted dresses and wearing fitted dresses), items 44 and 45 (wearing shirts, blouses, or sweaters tucked in and wearing shirts, blouses, or sweaters untucked) and item 48 (wearing shirts, blouses, or sweaters that cover the buttocks and hips).

Unfitted dresses. For item 32, wearing unfitted dresses, and a noticeable weight loss in the buttocks, it was expected that those who had reported they had a noticeable weight loss in the buttocks would also indicate they wore unfitted dresses with less frequency than those who had not reported a noticeable weight loss in the buttocks. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test ($Z = -.390$, $p = .3485$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the buttocks and wearing unfitted dresses.

Fitted dresses. For item 33, wearing fitted dresses, and a noticeable weight loss in the buttocks, it was expected that those who had reported they had a noticeable weight loss in the buttocks would also indicate they wore fitted dresses with more frequency than those who had not reported a noticeable weight loss in the buttocks. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -.534$, $p = .7035$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the buttocks and wearing fitted dresses.

Tucked in. For item 44, wearing tops tucked in, and a noticeable weight loss in the buttocks, it was expected that those who had reported they had a noticeable weight loss in the buttocks would also indicate they wore shirts, blouses, or sweaters tucked in with more frequency than those who had not reported a noticeable weight loss in the buttocks. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -.870$, $p = .192$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the buttocks and wearing shirts, blouses, or sweaters tucked in.

Untucked. For item 45, wearing tops untucked, and a noticeable weight loss in the buttocks, it was expected that those who reported they had a noticeable weight loss in the buttocks would also indicate they wore shirts, blouses, or sweaters untucked with less

frequency than those who had not reported a noticeable weight loss in the buttocks. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test ($Z = -.121$, $p = .452$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the buttocks and wearing shirts, blouses, or sweaters untucked.

Lower torso coverage. For item 48, wearing tops that cover the buttocks and hips, and a noticeable weight loss in the buttocks, it was expected that those who reported they had a noticeable weight loss in the buttocks would also indicate they wore shirts, blouses, or sweaters that cover the hips and buttocks with less frequency than those who had not reported a noticeable weight loss in the buttocks. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test ($Z = -.121$, $p = .452$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the buttocks and wearing shirts, blouses, or sweaters that cover the buttocks and hips.

Legs. The current clothing behavior items that were paired with having a noticeable weight loss in the legs were items 34 and 35 (wearing above-knee length skirts and wearing below-knee length skirts).

Shorts skirts. For item 34, wearing above-knee length skirts, and a noticeable weight loss in the legs, it was expected that those who had reported they had a noticeable weight loss in the legs would also indicate they wore skirts that were above knee length with more frequency than those who had not reported a noticeable weight loss in the legs. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -.899$, $p = .1845$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the legs and wearing skirts that were above knee length.

Long skirts. For item 35, wearing below-knee length skirts, and a noticeable weight loss in the legs, it was expected that those who reported they had a noticeable weight loss in the legs would also indicate they wore skirts that were below knee length with less frequency than those who had not reported a noticeable weight loss in the legs. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate

hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test (Z = -.754, p = .2255) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the legs and wearing skirts that were below knee length.

Waist. The current clothing behavior items that were paired with having a noticeable weight loss in the waist were items 38 and 39 (wearing pants and skirts with a full or partial elastic waist and wearing pants and skirts with a waistband), item 40 (wearing a belt with pants and skirts) and items 44 and 45 (wearing skirts, blouses, or sweaters tucked in and wearing shirts, blouses, or sweaters untucked).

Elastic waist. For item 38, wearing pants and skirts with a full or partial elastic waist, and a noticeable weight loss in the waist, it was expected that those who reported they had a noticeable weight loss in the waist would also indicate they wore pants and skirts with a full or partial elastic waist with less frequency than those who had not reported a noticeable weight loss in the waist. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test (Z = -3.987, p = .000) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Those with a noticeable weight loss in the waist had a higher mean score for wearing elastic waist pants and skirts than those who did not have a noticeable weight loss in the waist (see Table 44).

Table 44

Mean ranks for loss in waist and wearing elastic waist pants and skirts

Noticeable loss in Waist	**N**	**Mean Ranks for Wearing Elastic Waist**
Yes	50	63.30
No	121	95.38
Total	171	

Waistband. For item 39, wearing pants and skirts with a waistband, and a noticeable weight loss in the waist, it was expected that those who had reported they had a noticeable weight loss in the waist would also indicate they wore pants and skirts with a waistband with more frequency than those who had not reported a noticeable weight loss in the waist. Therefore, the null hypothesis was there would be no difference between the two groups

($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -3.293$, $p = .0005$) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Those with a noticeable weight loss in the waist had a higher mean score for wearing pants and skirts with a waistband than those who did not have a noticeable weight loss in the waist (see Table 45).

Table 45

Mean ranks for loss in waist and wearing pants and skirts with a waistband

Noticeable loss in Waist	N	Mean Ranks for Wearing Waistband
Yes	50	104.00
No	120	77.79
Total	170	

Belt. For item 40, wearing a belt with pants and skirts, and a noticeable weight loss in the waist, it was expected that those who had reported they had a noticeable weight loss in the waist would also indicate they wore a belt with pants and skirts with more frequency than those who had not reported a noticeable weight loss in the waist. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -.944$, $p = .1725$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the waist and wearing a belt with pants and skirts.

Tucked in. For item 44, wearing tops tucked in, and a noticeable weight loss in the waist, it was expected that those who had reported they had a noticeable weight loss in the waist would also indicate they wore shirts, blouses, or sweaters tucked in with more frequency than those who had not reported a noticeable weight loss in the waist. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -.297$, $p = .3835$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the waist and wearing shirts, blouses, or sweaters tucked in.

Untucked. For item 45, wearing tops untucked, and a noticeable weight loss in the waist, it was expected that those who reported they had a noticeable weight loss in the waist would

also indicate they wore shirts, blouses, or sweaters untucked with less frequency than those who had not reported a noticeable weight loss in the waist. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test ($Z = -.031$, $p = .5125$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the waist and wearing shirts, blouses, or sweaters untucked.

Stomach or abdomen. The current clothing behavior items that were paired with having a noticeable weight loss in the stomach or abdomen were items 30 and 31 (wearing flat front pants and wearing pleated front pants), items 32 and 33 (wearing unfitted dresses and wearing fitted dresses), items 36 and 37 (wearing straight skirts and wearing full skirts), items 39 and 39 (wearing pants and skirts with a full or partial elastic waist and wearing pants and skirts with a waistband), item 40 (wearing a belt with pants and skirts), and items 44 and 45 (wearing shirts, blouses, or sweaters tucked in and wearing shirts, blouses, or sweaters untucked).

Flat front pants. For item 30, wearing flat front pants, and a noticeable weight loss in the stomach or abdomen, it was expected that those who had reported they had a noticeable weight loss in the stomach or abdomen would also indicate they wore flat front pants with more frequency than those who had not reported a noticeable weight loss in the stomach or abdomen. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -.697$, $p = .757$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the stomach or abdomen and wearing flat front pants.

Pleated front pants. For item 31, wearing pleated front pants, and a noticeable weight loss in the stomach or abdomen, it was expected that those who reported they had a noticeable weight loss in the stomach or abdomen would also indicate they wore pleated front pants with less frequency than those who had not reported a noticeable weight loss in the stomach or abdomen. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test ($Z = -.998$, $p = .841$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the stomach or abdomen and wearing pleated front pants.

Unfitted dresses. For item 32, wearing unfitted dresses, and a noticeable weight loss in the stomach or abdomen, it was expected that those who reported they had a noticeable weight

loss in the stomach or abdomen would also indicate they wore unfitted dresses with less frequency than those who had not reported a noticeable weight loss in the stomach or abdomen. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test ($Z = -1.018$, $p = .1545$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the stomach or abdomen and wearing unfitted dresses.

Fitted dresses. For item 33, wearing fitted dresses, and a noticeable weight loss in the stomach or abdomen, it was expected that those who had reported they had a noticeable weight loss in the stomach or abdomen would also indicate they wore fitted dresses with more frequency than those who had not reported a noticeable weight loss in the stomach or abdomen. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -.316$, $p = .624$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the stomach or abdomen and wearing fitted dresses.

Straight skirts. For item 36, wearing straight skirts, and a noticeable weight loss in the stomach or abdomen, it was expected that those who had reported they had a noticeable weight loss in the stomach or abdomen would also indicate they wore straight skirts with more frequency than those who had not reported a noticeable weight loss in the stomach or abdomen. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -.075$, $p = .53$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the stomach or abdomen and wearing straight skirts.

Full skirts. For item 37, wearing full skirts, and a noticeable weight loss in the stomach or abdomen, it was expected that those who reported they had a noticeable weight loss in the stomach or abdomen would also indicate they wore full skirts with less frequency than those who had not reported a noticeable weight loss in the stomach or abdomen. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test ($Z = -.154$, $p = .561$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the stomach or abdomen and wearing full skirts.

Elastic waist. For item 38, wearing pants and skirts with a full or partial elastic waist, and a noticeable weight loss in the stomach or abdomen, it was expected that those who reported they had a noticeable weight loss in the stomach or abdomen would also indicate they wore pants and skirts with an elastic waist with less frequency than those who had not reported a noticeable weight loss in the stomach or abdomen. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test (Z = -.258, p = .871) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the stomach or abdomen and wearing elastic waist pants and skirts.

Waistband. For item 39, wearing pants and skirts with a waistband, and a noticeable weight loss in the stomach or abdomen, it was expected that those who had reported they had a noticeable weight loss in the stomach or abdomen would also indicate they wore pants and skirts with a waistband with more frequency than those who had not reported a noticeable weight loss in the stomach or abdomen. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test (Z = -.989, p = .1615) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the stomach or abdomen and wearing pants and skirts with a waistband.

Belt. For item 40, wearing a belt with pants and skirts, and a noticeable weight loss in the stomach or abdomen, it was expected that those who had reported they had a noticeable weight loss in the stomach or abdomen would also indicate they wore a belt with pants and skirts with more frequency than those who had not reported a noticeable weight loss in the stomach or abdomen. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test (Z = -1.532, p = .063) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the stomach or abdomen and wearing belts with pants and skirts.

Tucked in. For item 44, wearing tops tucked in, and a noticeable weight loss in the stomach or abdomen, it was expected that those who had reported they had a noticeable weight loss in the stomach or abdomen would also indicate they wore shirts, blouses, or sweaters tucked in with more frequency than those who had not reported a noticeable weight loss in the stomach or abdomen. Therefore, the null hypothesis was there would be no difference between

the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test (Z = -.072, p = .4715) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the stomach or abdomen and wearing shirts, blouses, or sweaters tucked in.

Untucked. For item 45, wearing tops untucked, and a noticeable weight loss in the stomach or abdomen, it was expected that those who reported they had a noticeable weight loss in the stomach or abdomen would also indicate they wore shirts, blouses, or sweaters untucked with less frequency than those who had not reported a noticeable weight loss in the stomach or abdomen. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test (Z = -.385, p = .35) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the stomach or abdomen and wearing shirts, blouses, or sweaters untucked.

Bust or breasts. The current clothing behavior items that were paired with having a noticeable weight loss in the bust or breasts were items 44 and 45 (wearing shirts, blouses, or sweaters tucked in and wearing shirts, blouses, or sweaters untucked) and items 46 and 47 (wearing shirts, blouses, or sweaters that were close-fitting and wearing shirts, blouses, or sweaters that were loose-fitting).

Tucked in. For item 44, wearing tops that are tucked in, and a noticeable weight loss in the bust or breasts, it was expected that those who had reported they had a noticeable weight loss in the bust or breasts would also indicate they wore shirts, blouses, or sweaters that were tucked in with more frequency than those who had not reported a noticeable weight loss in the bust or breasts. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test (Z = -.133, p = .447) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the bust or breasts and wearing shirts, blouses, or sweaters tucked in.

Untucked. For item 45, wearing tops that are untucked, and a noticeable weight loss in the bust or breasts, it was expected that those who reported they had a noticeable weight loss in the bust or breasts would also indicate they wore shirts, blouses, or sweaters untucked with less frequency than those who had not reported a noticeable weight loss in the bust or breasts. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test (Z = -.088, p = .535) indicated there was no significant difference between the two groups; therefore, the

null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the bust or breasts and wearing shirts, blouses, or sweaters untucked.

Close-fitting tops. For item 46, wearing tops that are close-fitting, and a noticeable weight loss in the bust or breasts, it was expected that those who had reported they had a noticeable weight loss in the bust or breasts would also indicate they wore shirts, blouses, or sweaters that were close-fitting with more frequency than those who had not reported a noticeable weight loss in the bust or breasts. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -1.678$, $p = .9535$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the bust or breasts and wearing shirts, blouses, or sweaters that were close-fitting.

Loose-fitting tops. For item 47, wearing tops that are loose-fitting, and a noticeable weight loss in the bust or breasts, it was expected that those who reported they had a noticeable weight loss in the bust or breasts would also indicate they wore shirts, blouses, or sweaters that were loose-fitting with less frequency than those who had not reported a noticeable weight loss in the bust or breasts. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test ($Z = -.502$, $p = .692$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the bust or breasts and wearing shirts, blouses, or sweaters that were loose-fitting.

Arms. The current clothing behavior items that were paired with having a noticeable weight loss in the arms were items 41 (wearing shirts, blouses, or sweaters that are long sleeved), 42 (wearing shirts, blouses, or sweaters that are short sleeved), and 43 (wearing shirts, blouses, or sweaters that were sleeveless).

Long sleeved tops. For item 41, wearing long sleeved tops, and a noticeable weight loss in the arms, it was expected that those who reported they had a noticeable weight loss in the arms would also indicate they wore shirts, blouses, or sweaters that were long sleeved with less frequency than those who had not reported a noticeable weight loss in the arms. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} < \mu_{No\ Loss}$. The results of the test ($Z = -.559$, $p = .288$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was

accepted. There was not a relationship between a noticeable weight loss in the arms and wearing shirts, blouses, or sweaters that were long sleeved.

Short sleeved tops. For item 42, wearing short sleeved tops, and a noticeable weight loss in the arms, it was expected that those who had reported they had a noticeable weight loss in the arms would also indicate they wore shirts, blouses, or sweaters that were short sleeved with more frequency than those who had not reported a noticeable weight loss in the arms. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -.257$, $p = .6012$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the arms and wearing shirts, blouses, or sweaters that were short sleeved.

Sleeveless tops. For item 43, wearing sleeveless tops, and a noticeable weight loss in the arms, it was expected that those who had reported they had a noticeable weight loss in the arms would also indicate they wore shirts, blouses, or sweaters that were sleeveless with more frequency than those who had not reported a noticeable weight loss in the arms. Therefore, the null hypothesis was there would be no difference between the two groups ($\mu_{Loss} = \mu_{No\ Loss}$). The alternate hypothesis was $\mu_{Loss} > \mu_{No\ Loss}$. The results of the test ($Z = -.272$, $p = .6075$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. There was not a relationship between a noticeable weight loss in the arms and wearing shirts, blouses, or sweaters that were sleeveless.

Summary of Hypothesis 4. This hypothesis tested the relationship between created appearance and current clothing behavior. Table 46 shows the test results for Hypothesis 4. The direction of the hypothesized relationship was dependent on the body area and the clothing behavior. For example, it was hypothesized that a noticeable weight loss in the waist would be positively related to wearing shirts, blouses, or sweaters tucked in, but negatively related to wearing shirts, blouses, or sweaters untucked. The results of the statistical testing indicated there were no relationships between clothing behavior and a noticeable weight loss for the buttocks, legs, stomach or abdomen, bust or breasts, and arms. However, the results did reveal relationships between clothing behavior and a noticeable weight loss for the face, hips, thighs, and waist.

Table 46

Test results for Hypothesis 4

Test	Test Statistic (Z)	P-value
Noticeable loss in face		
and wearing dark colored clothing	-.418	.338
and wearing bright colored clothing	-1.647	.05*
Noticeable loss in hips		
and wearing flat front pants	-2.756	.997
and wearing pleated front pants	-2.897	.998
and wearing unfitted dresses	-1.860	.0315*
and wearing fitted dresses	-.808	.2095
and wearing straight skirts	-.485	.686
and wearing full skirts	-.744	.7715
and wearing tops that cover lower torso	-.405	.3425
Noticeable loss in thighs		
and wearing flat front pants	-.716	.237
and wearing pleated front pants	-1.110	.1335
and wearing unfitted dresses	-2.667	.004*
and wearing fitted dresses	-1.323	.093
and wearing straight skirts	-.901	.184
and wearing full skirts	-.957	.1695
Noticeable loss in buttocks		
and wearing unfitted dresses	-.390	.3485
and wearing fitted dresses	-.534	.7035
and wearing tops tucked in	-.870	.192
and wearing tops untucked	-.402	.344
and wearing tops that cover lower torso	-.121	.452
Noticeable loss in legs		
and wearing short skirts	-.899	.1845
and wearing long skirts	-.754	.2255

Test	Test Statistic (Z)	P-value
Noticeable loss in waist		
and wearing pants and skirts with elastic waist	-3.987	.0000*
and wearing pants and skirts with a waistband	-3.293	.0005*
and wearing belts with pants and skirts	-.944	.1725
and wearing tops tucked in	-.297	.3835
and wearing tops untucked	-.031	.5125
Noticeable loss in stomach or abdomen		
and wearing flat front pants	-.697	.757
and wearing pleated front pants	-.998	.841
and wearing unfitted dresses	-1.018	.1545
and wearing fitted dresses	-.316	.624
and wearing straight skirts	-.075	.53
and wearing full skirts	-.154	.561
and wearing tops tucked in	-.072	.4715
and wearing tops untucked	-.385	.35
and wearing pants and skirts with elastic waist	-.258	.871
and wearing pants and skirts with waistband	-.989	.1615
and wearing belts with pants and skirts	-1.532	.063
Noticeable loss in bust or breasts		
and wearing close-fitting tops	-1.678	.9535
and wearing loose-fitting tops	-.502	.692
and wearing tops tucked in	-.133	.447
and wearing tops untucked	-.088	.535
Noticeable loss in arms		
and wearing long sleeved tops	-.559	.288
and wearing short sleeved tops	-.257	.6012
and wearing sleeveless tops	-.272	.6075

Note: * = Significant at the .05 level.

Results indicated a positive relationship between a noticeable weight loss in the face and wearing bright colored clothing. A noticeable weight loss in the hips and thighs were negatively related to wearing unfitted dresses. A noticeable weight loss in the waist was

negatively related to wearing pants and skirts with a full or partial elastic waist, but positively related to wearing pants and skirts with a waistband.

These findings correspond to the findings of Ogle (1999) and Charles and Kerr (1986) who found that changes in clothing behavior did occur with weight loss. In their studies, women who had lost weight wore more fitted clothing, instead of wearing clothing to hide their bodies. Out of the 45 tests conducted to examine the relationship between created appearance and current clothing behavior, 40 indicated acceptance of the individual null hypotheses and five indicated rejection of the individual null hypotheses. Therefore, results indicate minimal support for Hypothesis 4.

Hypothesis 5. *Among the women enrolled in a commercial weight loss program, there will be a difference between their current clothing behavior and their clothing behavior prior to losing weight.*

The questionnaire items that were used included those related to current clothing behavior (items 26-48) and prior clothing behavior (items 49-71). The questionnaire items were paired together and tested to see if there was a difference between an individual's current clothing behavior and prior clothing behavior. For example, item 26 (current loose fitting clothing) was paired with item 49 (prior loose fitting clothing). Wilcoxon's signed ranks test was used to test the difference between the variables. All rejection levels were set at the .05 significance level.

Loose fitting clothing. It was expected that respondents would currently wear loose fitting clothing with less frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} < \mu_{Prior}$. The results of the Wilcoxon's signed ranks test ($Z = -1.304$, $p = .096$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents did not indicate they currently wore loose fitting clothing with less frequency than they did before they lost weight.

Tight fitting clothing. It was expected that respondents would currently wear tight fitting clothing with more frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} > \mu_{Prior}$. The results of the test ($Z = -.635$, $p = .2625$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents did not indicate they currently wore tight fitting clothing with more frequency than they did before they lost weight.

Dark colored clothing. It was expected that respondents would currently wear dark colored clothing with less frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} < \mu_{Prior}$. The results of the test (Z = -3.287, p = .0005) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore dark colored clothing with less frequency than they did before they lost weight (see Table 47). Even though an examination of the frequency of responses indicated that 42.1% of respondents reported currently wearing dark colored clothing "Always" or "Most of the Time" compared to 41.5% of respondents wearing dark colored clothing prior to losing weight, Wilcoxon's signed ranks test uses the mean rank for each item and not the frequency counts.

Table 47

Mean ranks for wearing dark colored clothing before and after weight loss

Frequency of Wear	**N**	**Mean Ranks for Wearing Dark Colored Clothing**
Prior<Current	10	19.00
Prior>Current	30	21.00
Prior=Current	94	
Total	134	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Bright colored clothing. It was expected that respondents would currently wear bright colored clothing with more frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} > \mu_{Prior}$. The results of the test (Z = -3.172, p = .001) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore bright colored clothing with more frequency than they did before they lost weight (see Table 48). An examination of the frequency of responses indicated that 17.6% of respondents reported currently wearing bright colored clothing "Always" or "Most of the Time" compared to 11.1% of respondents wearing bright colored clothing prior to losing weight.

Table 48

Mean ranks for wearing bright colored clothing before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Bright Colored Clothing
Prior<Current	24	15.75
Prior>Current	6	14.50
Prior=Current	105	
Total	135	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Flat front pants. It was expected that respondents would currently wear flat front pants with more frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} > \mu_{Prior}$. The results of the test ($Z = -4.450$, $p = .000$) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore flat front pants with more frequency than they did before they lost weight (see Table 49). An examination of the frequency of responses indicated that 68.5% of respondents reported currently wearing flat front pants “Always” or “Most of the Time” compared to 39.8% of respondents wearing flat front pants prior to losing weight.

Table 49

Mean ranks for wearing flat front pants before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Flat Front Pants
Prior<Current	38	23.53
Prior>Current	7	20.14
Prior=Current	84	
Total	129	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Pleated front pants. It was expected that respondents would currently wear pleated front pants with less frequency than they did prior to losing weight. Therefore, the null hypothesis was

there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} < \mu_{Prior}$. The results of the test (Z = -2.844, p = .002) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore pleated front pants with less frequency than they did before they lost weight (see Table 50). An examination of the frequency of responses indicated that 11.1% of respondents reported currently wearing pleated front pants "Always" or "Most of the Time" compared to 14.6% of respondents wearing pleated front pants prior to losing weight.

Table 50

Mean ranks for wearing pleated front pants before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Pleated Front Pants
Prior<Current	19	23.82
Prior>Current	36	30.21
Prior=Current	78	
Total	133	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Unfitted dresses. It was expected that respondents would currently wear unfitted dresses with less frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} < \mu_{Prior}$. The results of the test (Z = -4.767, p = .000) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore unfitted dresses with less frequency than they did before they lost weight (see Table 51). An examination of the frequency of responses indicated that 40.4% of respondents reported currently wearing unfitted dresses "Always" or "Most of the Time" compared to 42.7% of respondents wearing unfitted dresses prior to losing weight.

Fitted dresses. It was expected that respondents would currently wear fitted dresses with more frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} > \mu_{Prior}$. The results of the test (Z = -3.023, p = .0015) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore fitted dresses with more frequency than they did before they lost

weight (see Table 52). An examination of the frequency of responses indicated that 21.0% of respondents reported currently wearing fitted dresses “Always” or “Most of the Time” compared to 8.8% of respondents wearing fitted dresses prior to losing weight.

Table 51

Mean ranks for wearing unfitted dresses before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Unfitted Dresses
Prior<Current	8	24.75
Prior>Current	44	26.82
Prior=Current	81	
Total	133	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Table 52

Mean ranks for wearing fitted dresses before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Fitted Dresses
Prior<Current	39	26.62
Prior>Current	14	28.07
Prior=Current	79	
Total	132	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Short skirts. It was expected that respondents would currently wear skirts that were above knee length with more frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} > \mu_{Prior}$. The results of the test ($Z = -2.780$, $p = .0025$) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore skirts that were above knee length with more frequency than they did before they lost weight (see Table 53). An examination of the

Table 53

Mean ranks for wearing short skirts before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Short Skirts
Prior<Current	24	17.81
Prior>Current	9	14.83
Prior=Current	99	
Total	132	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

frequency of responses indicated that 12.8% of respondents reported currently wearing short skirts “Always” or “Most of the Time” compared to 9.3% of respondents wearing short skirts prior to losing weight.

Long skirts. It was expected that respondents would currently wear skirts that were below knee length with less frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} < \mu_{Prior}$. The results of the test ($Z = -1.463$, $p = .072$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents did not indicate they currently wore skirts that were below knee length with less frequency than they did before they lost weight.

Straight skirts. It was expected that respondents would currently wear straight skirts with more frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} > \mu_{Prior}$. The results of the test ($Z = -4.099$, $p = .000$) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore straight skirts with more frequency than they did before they lost weight (see Table 54). An examination of the frequency of responses indicated that 37.4% of respondents reported currently wearing straight skirts “Always” or “Most of the Time” compared to 20.5% of respondents wearing straight skirts prior to losing weight.

Full skirts. It was expected that respondents would currently wear full skirts with less frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was

Table 54

Mean ranks for wearing straight skirts before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Straight Skirts
Prior<Current	36	24.75
Prior>Current	10	19.00
Prior=Current	84	
Total	130	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

$\mu_{Current} < \mu_{Prior}$. The results of the test (Z = -3.775, p = .000) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore full skirts with less frequency than they did before they lost weight (see Table 55). An examination of the frequency of responses indicated that 22.2% of respondents reported currently wearing full skirts “Always” or “Most of the Time” compared to 24.6% of respondents wearing full skirts prior to losing weight.

Table 55

Mean ranks for wearing full skirts before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Full Skirts
Prior<Current	9	18.00
Prior>Current	32	21.84
Prior=Current	91	
Total	132	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Elastic waist. It was expected that respondents would currently wear pants and skirts with a full or partial elastic waist with less frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables

($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} < \mu_{Prior}$. The results of the test (Z = -4.969, p = .000) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore pants and skirts with a full or partial elastic waist with less frequency than they did before they lost weight (see Table 56). An examination of the frequency of responses indicated that 21.1% of respondents reported currently wearing elastic waist pants and skirts "Always" or "Most of the Time" compared to 29.2% of respondents wearing elastic waist pants and skirts prior to losing weight.

Table 56

Mean ranks for wearing elastic waist pants and skirts before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Elastic Waist
Prior<Current	7	27.71
Prior>Current	47	27.47
Prior=Current	79	
Total	133	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Waistband. It was expected that respondents would currently wear pants and skirts with a waistband with more frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} > \mu_{Prior}$. The results of the test (Z = -2.821, p = .0025) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore pants and skirts with a waistband with more frequency than they did before they lost weight (see Table 57). An examination of the frequency of responses indicated that 56.1% of respondents reported currently wearing pants and skirts with a waistband "Always" or "Most of the Time" compared to 31.6% of respondents wearing pants and skirts with a waistband prior to losing weight.

Belt. It was expected that respondents would currently wear a belt with pants and skirts with more frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} > \mu_{Prior}$. The results of the test (Z = -3.729, p = .000) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents

did indicate they currently wore a belt with pants and skirts with more frequency than they did before they lost weight (see Table 58). An examination of the frequency of responses indicated that 19.9% of respondents reported currently wearing belts with pants and skirts "Always" or "Most of the Time" compared to 11.7% of respondents wearing belts with pants and skirts prior to losing weight.

Table 57

Mean ranks for wearing pants and skirts with a waistband before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Waistband
Prior<Current	32	21.78
Prior>Current	11	22.64
Prior=Current	90	
Total	133	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Table 58

Mean ranks for wearing a belt with pants and skirts before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Belts
Prior<Current	38	24.34
Prior>Current	10	25.10
Prior=Current	84	
Total	132	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Long sleeves. It was expected that respondents would currently wear shirts, blouses, or sweaters that were long sleeved with less frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} < \mu_{Prior}$. The results of the test ($Z = -2.166$, $p = .015$) indicated there was a significant difference between the two groups; therefore, the null

hypothesis was rejected. Respondents did indicate they currently wore long sleeved shirts, blouses, or sweaters with less frequency than they did before they lost weight (see Table 59). Even though an examination of the frequency of responses indicated that 18.1% of respondents reported currently wearing long sleeved tops “Always” or “Most of the Time” compared to 17.5% of respondents wearing long sleeved tops prior to losing weight, Wilcoxon’s signed ranks test uses the mean rank for each item and not the frequency counts.

Table 59

Mean ranks for wearing long sleeved tops before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Long Sleeved Tops
Prior<Current	5	10.00
Prior>Current	15	10.67
Prior=Current	111	
Total	131	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Short sleeves. It was expected that respondents would currently wear shirts, blouses, or sweaters that were short sleeved with more frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} > \mu_{Prior}$. The results of the test ($Z = -.626$, $p = .734$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents did not indicate they currently wore short sleeved shirts, blouses, or sweaters with more frequency than they did before they lost weight.

Sleeveless. It was expected that respondents would currently wear shirts, blouses, or sweaters that were sleeveless with more frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} > \mu_{Prior}$. The results of the test ($Z = -1.414$, $p = .0785$) indicated there was no significant difference between the two groups; therefore, the null hypothesis was accepted. Respondents did not indicate they currently wore sleeveless shirts, blouses, or sweaters with more frequency than they did before they lost weight.

Tucked. It was expected that respondents would currently wear shirts, blouses, or sweaters tucked in with more frequency than they did prior to losing weight. Therefore, the null

hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} > \mu_{Prior}$. The results of the test (Z = -4.037, p = .000) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore shirts, blouses, or sweaters tucked in with more frequency than they did before they lost weight (see Table 60). An examination of the frequency of responses indicated that 32.2% of respondents reported currently wearing tops tucked in "Always" or "Most of the Time" compared to 6.5% of respondents wearing tops tucked in prior to losing weight.

Table 60

Mean ranks for wearing tops tucked in before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Tucked in Tops
Prior<Current	40	24.81
Prior>Current	9	25.83
Prior=Current	84	
Total	133	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Untucked. It was expected that respondents would currently wear shirts, blouses, or sweaters untucked with less frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} < \mu_{Prior}$. The results of the test (Z = -2.778, p = .0025) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore shirts, blouses, or sweaters untucked with less frequency than they did before they lost weight (see Table 61). Even though an examination of the frequency of responses indicated that 56.1% of respondents reported currently wearing untucked tops "Always" or "Most of the Time" compared to 50.9% of respondents wearing untucked tops prior to losing weight, Wilcoxon's signed ranks test uses the mean rank for each item and not the frequency counts.

Close-fitting tops. It was expected that respondents would currently wear shirts, blouses, or sweaters that were close-fitting with more frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables

($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} > \mu_{Prior}$. The results of the test (Z = -3.461, p = .0005) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore shirts, blouses, or sweaters that were close-fitting with more frequency than they did before they lost weight (see Table 62). An examination of the frequency of responses indicated that 14.1% of respondents reported currently wearing close-fitting tops "Always" or "Most of the Time" compared to 8.2% of respondents wearing close-fitting tops prior to losing weight.

Table 61

Mean ranks for wearing tops untucked before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Untucked Tops
Prior<Current	12	23.83
Prior>Current	33	22.70
Prior=Current	87	
Total	132	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Table 62

Mean ranks for wearing close-fitting tops before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Close-fitting Tops
Prior<Current	42	26.71
Prior>Current	12	30.25
Prior=Current	76	
Total	130	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Loose-fitting tops. It was expected that respondents would currently wear shirts, blouses, or sweaters that were loose-fitting with less frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} < \mu_{Prior}$. The results of the test (Z = -3.700, p = .000) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore shirts, blouses, or sweaters that were loose-fitting with less frequency than they did before they lost weight (see Table 63). An examination of the frequency of responses indicated that 40.3% of respondents reported currently wearing loose-fitting tops "Always" or "Most of the Time" compared to 42.7% of respondents wearing loose-fitting tops prior to losing weight.

Table 63

Mean ranks for wearing loose-fitting tops before and after weight loss

Frequency of Wear	N	Mean Ranks for Wearing Loose-fitting Tops
Prior<Current	14	25.96
Prior>Current	41	28.70
Prior=Current	77	
Total	132	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Lower torso coverage. It was expected that respondents would currently wear shirts, blouses, or sweaters that cover the buttocks and hips with less frequency than they did prior to losing weight. Therefore, the null hypothesis was there was no difference between the two variables ($\mu_{Current} = \mu_{Prior}$). The alternate hypothesis was $\mu_{Current} < \mu_{Prior}$. The results of the test (Z = -5.253, p = .000) indicated there was a significant difference between the two groups; therefore, the null hypothesis was rejected. Respondents did indicate they currently wore shirts, blouses, or sweaters that cover the buttocks and hips with less frequency than they did before they lost weight (see Table 64). An examination of the frequency of responses indicated that 24.0% of respondents reported currently wearing tops that covered the lower torso "Always" or "Most of the Time" compared to 31.6% of respondents wearing tops that covered the lower torso prior to losing weight.

Table 64

Mean ranks for wearing tops that cover the lower torso before and after weight loss

Frequency of Wear	N	Mean Ranks for Lower Torso Coverage
Prior<Current	9	24.61
Prior>Current	50	30.97
Prior=Current	74	
Total	133	

Notes: Prior<Current: Frequency of wear was less before weight loss than after weight loss
Prior>Current: Frequency of wear was more before weight loss than after weight loss
Prior=Current: Frequency of wear was equal before and after weight loss

Summary of Hypothesis 5. This hypothesis tested the relationship between current clothing behavior and prior clothing behavior. Table 65 shows the test results for Hypothesis 5. The direction of the hypothesized relationship was dependent on the clothing behavior. For example, it was hypothesized that respondents would indicate they currently wore fitted dresses with more frequency, but unfitted dresses with less frequency, than they did prior to losing weight. Results of the statistical testing indicated no significant relationship between current clothing behavior and prior clothing behavior for loose fitting clothing; tight fitting clothing; skirts that were below knee length; short sleeved shirts, blouses, or sweaters; or sleeveless shirts, blouses, or sweaters. Results did indicate significant relationships between current clothing behavior and prior clothing for the following items: dark colored clothing; bright colored clothing; flat front pants; pleated front pants; unfitted dresses; fitted dresses; skirts that were above knee length; straight skirts; full skirts; pants and skirts with an elastic waist; pants and skirts with a waistband; wearing belts with pants and skirts; long sleeved shirts, blouses, or sweaters; shirts, blouses, or sweaters that were tucked in; shirts, blouses, or sweaters that were untucked; close-fitting shirts, blouses, or sweaters; loose-fitting shirts, blouses, or sweaters; and shirts, blouses, or sweaters that cover the buttocks and hips.

Respondents indicated they currently wore the following items with more frequency than they did prior to losing weight: bright colored clothing; flat front pants; fitted dresses; short skirts; straight skirts; pants and skirts with a waistband; a belt with pants and skirts; shirts, blouses, or sweaters tucked in; and close-fitting shirts, blouses, or sweaters. Respondents also indicated they currently wore the following items with less frequency than they did prior to losing weight: dark colored clothing; pleated front pants; unfitted dresses; full skirts; pants and skirts with a full

Table 65

Test results for Hypothesis 5

Test	Z	P-value
Loose fitting clothing	-1.304	.096
Tight fitting clothing	-.635	.2625
Dark colored clothing	-3.287	.0005*
Bright colored clothing	-3.172	.001*
Flat front pants	-4.450	.000*
Pleated front pants	-2.844	.002*
Unfitted dresses	-4.767	.000*
Fitted dresses	-3.2023	.0015*
Short skirts	-2.780	.0025*
Long skirts	-1.463	.072
Straight skirts	-4.099	.000*
Full skirts	-3.775	.000*
Elastic waist	-4.969	.000*
Waistband	-2.821	.0025*
Belt	-3.729	.000*
Long sleeved tops	-2.166	.015*
Short sleeved tops	-.626	.734
Sleeveless tops	-1.414	.0785
Tucked in tops	-4.037	.000*
Untucked tops	-2.778	.0025*
Close-fitting tops	-3.461	.005*
Loose-fitting tops	-3.700	.000*
Lower torso coverage	-5.253	.000*

Note: * = Significant at the .05 level.

or partial elastic waist; long sleeved shirts, blouses, or sweaters; shirts, blouses, or sweaters that were untucked; loose-fitting shirts, blouses, or sweaters; and shirts, blouses, or sweaters that cover the buttocks and hips.

These findings correspond to the findings of Ogle (1999) and Charles and Kerr (1986) who found that changes in clothing behavior did occur with weight loss. In their studies, women

who had lost weight wore more fitted clothing, instead of wearing clothing to hide their bodies. However, theses studies did not ask about specific clothing styles or items, but rather focused on general clothing behavior.

Out of the 23 tests conducted to examine the relationship between current clothing behavior and prior clothing behavior, five indicated acceptance of the individual null hypotheses and 18 indicated rejection of the individual null hypotheses. Therefore, results indicate partial support for Hypothesis 5.

Hypothesis 6. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and appearance management.*

The questionnaire items that were used included those related to demographics (items 72, 73, and 75-77) and appearance management (items 17 and 21-25). Demographics that were used in statistical analysis included age, income, occupation, education, and marital status. Because 96.5 percent of the sample indicated their racial/ethnic group was Caucasian, this item was not included in the analysis. One-way ANOVA, t-tests, gamma and chi-square were used to determine the relationship between the variables. The results of the four sub-hypotheses are presented. All rejection levels were set at the .05 significance level.

Hypothesis 6A: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and length of time. One-way ANOVA with a test for linear trend was used to test the demographic variables of age, income, and education (items 72, 73, and 76) against the length of time an individual had been in the Weight Watchers® program (item 17). One-way ANOVA was used to test the demographic variable occupation (item 75) against the length of time an individual had been in the Weight Watchers® program (item 17). A t-test was used to test the demographic variable of marital status (item 77) against the length of time an individual had been in the Weight Watchers® program (item 17).

Age. It was expected that those who were older would have been in the weight loss program longer. Therefore, the null hypothesis was there was no difference between the different age groups ($\mu_1 = \mu_2 = \ldots \mu_6$). The alternate hypothesis was that at least one mean differed. The results of the test ($p = .016$) indicated the six age groups do differ significantly and the null hypothesis was rejected. There was a relationship between age and the respondents' length of time in the weight loss program.

To test whether the differences followed a consistent pattern, a test for linear trend was performed. The null hypothesis was there was no linear trend. The results of the test ($p = .003$) indicated the differences do follow a consistent pattern; therefore, the null hypothesis was

rejected. An examination of the means plot indicated a positive linear trend. Therefore, length of time in the weight loss program increased with age of the respondents; in other words, those who were older had been in the weight loss program longer (see Figure 6).

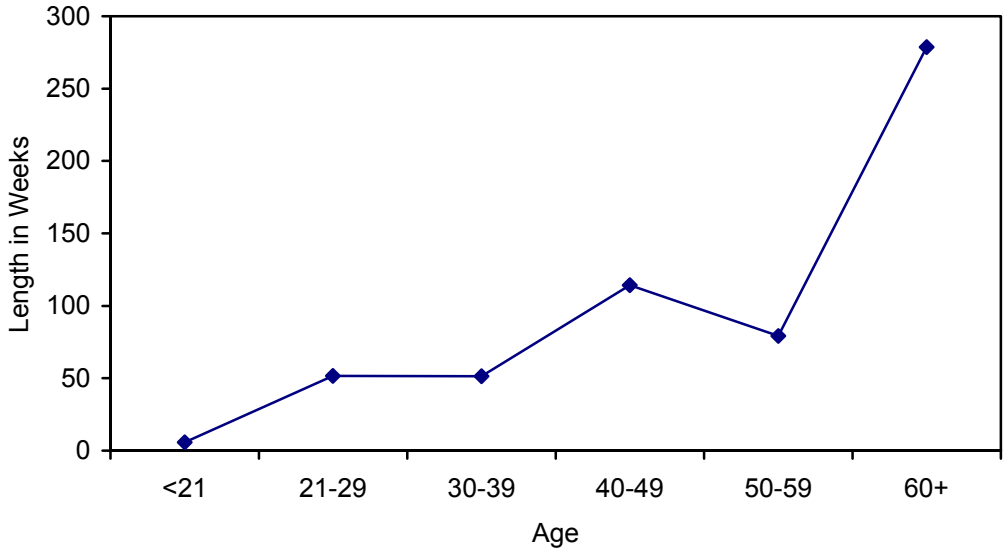

Figure 6. Means plot for age and length of time in program.

Income. It was expected that those who had a higher income would have been in the weight loss program longer. Therefore, the null hypothesis was there was no difference between the income groups ($\mu_1 = \mu_2 = \ldots \mu_6$). The alternate hypothesis was that at least one mean differed. The results of the test ($p = .243$) indicated the six income groups did not differ significantly and the null hypothesis was accepted. There was not a relationship between level of income and the respondents' length of time in the weight loss program.

Education. It was expected that there would be no relationship between education level and length of time in the weight loss program. Therefore, the null hypothesis was there was no difference between the education groups ($\mu_1 = \mu_2 = \ldots \mu_5$). The alternate hypothesis was that at least one mean differed. The results of the test ($p = .031$) indicated the five education groups did differ significantly and the null hypothesis was rejected. There was a relationship between education level and the respondents' length of time in the weight loss program.

To test whether the differences followed a consistent pattern, a test for linear trend was performed. The null hypothesis was there was no linear trend. The results of the test ($p = .225$) indicated the differences do not follow a consistent pattern; therefore, the null hypothesis was

accepted. An examination of the means plot indicated there was no linear trend. While length of time in the weight loss program differed with education levels, there was no consistent pattern to the difference (see Figure 7). An examination of the mean length of time indicated that respondents in high school had been in the weight loss program the longest length of time (almost 214 weeks) and respondents with a graduate degree had been in the weight loss program the second longest length of time (almost 106 weeks).

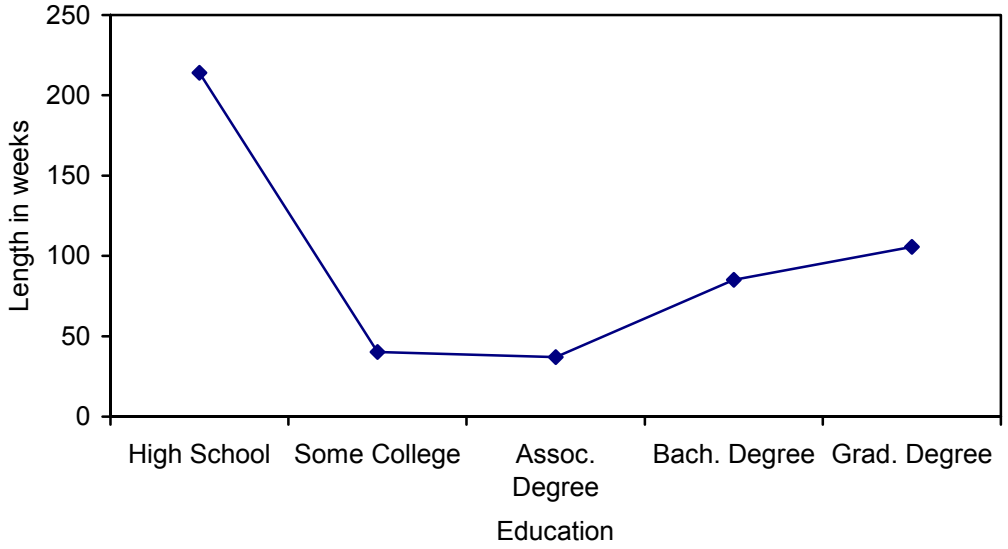

Figure 7. Means plot for level of education and length of time in program.

Occupation. It was expected there would be no relationship between occupation and length of time in the weight loss program. Therefore, the null hypothesis was there was no difference between the different occupations ($\mu_1 = \mu_2 = \ldots \mu_6$). The alternate hypothesis was that at least one mean differed. The results of the test ($p = .052$) indicated the six occupation groups did not differ significantly and the null hypothesis was accepted. There was not a relationship between occupation and the respondents' length of time in the weight loss program.

Marital status. It was expected there would be no relationship between marital status and length of time in the weight loss program. Therefore, the null hypothesis was there was no difference between the two groups ($\mu_1 = \mu_2$). The alternate hypothesis was $\mu_1 \neq \mu_2$. The results of the test ($t = .655$, $p = .514$) indicated there was no significant difference and the null hypothesis was accepted. There was not a relationship between marital status and the respondents' length of time in the weight loss program.

Hypothesis 6B: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and following the weight loss program. Gamma was used to test the demographic variables of age, income, and education (items 72, 73, and 76) against how diligently an individual followed the Weight Watchers® program (items 21-23). Chi-square was used to test the demographic variables occupation and marital status (items 75 and 77) against how diligently an individual followed the Weight Watchers® program (items 21-23).

Age. It was expected there would be no relationship between age and following the weight loss program (staying within the points range, drinking six glasses of water every day, and eating five fruits and vegetables every day). Therefore, the null hypotheses for all three parts of the weight loss program were gamma (γ) = 0, and the alternate hypotheses were $\gamma \neq 0$. The results of the tests for points (γ = -.012, p = .894) and water (γ = .043, p = .605) indicated there were no relationships and the null hypotheses were accepted. There was not a relationship between age and a respondent staying within the points range or drinking six glasses of water every day. The results of the test for fruits/vegetables (γ = .262, p = .001) indicated there was a relationship between age and fruits/vegetables and the null hypothesis was rejected. An examination of the frequency of responses indicated that those who were older stated they more often ate five fruits and vegetables every day than those who were younger (see Table 66).

Income. It was expected there would be no relationship between income and following the weight loss program (staying within the points range, drinking six glasses of water every day, and eating five fruits and vegetables every day). Therefore, the null hypotheses for all three parts of the program were gamma (γ) = 0, and the alternate hypotheses were $\gamma \neq 0$. The results of the tests for points (γ = -.030, p = .777), water (γ = .098, p = .314), and fruits/vegetables (γ = .024, p = .804) indicated there were no relationships between income and a respondent staying within the points range, drinking six glasses of water every day, or eating five fruits and vegetables every day; therefore, the null hypotheses were accepted.

Education. It was expected there would be no relationship between education and following the weight loss program (staying within the points range, drinking six glasses of water every day, and eating five fruits and vegetables every day). Therefore, the null hypotheses for all three parts of the program were gamma (γ) = 0, and the alternate hypotheses were $\gamma \neq 0$. The results of the tests for points (γ = -.076, p = .470), water (γ = -.030, p = .737), and fruits/vegetables (γ = -.060, p = .479) indicated there were no relationships between education

Table 66

Frequency of responses for age and eating fruits/vegetables

Age	Eating Five Fruits/Vegetables Daily				Total
	Never	Rarely	Sometimes	Most of the Time	
Under 21	1	3	6	1	11
21-29	7	11	11	5	34
30-39	4	12	11	4	31
40-49	2	10	17	6	35
50-59	0	9	20	9	38
60 or over	1	3	10	4	18
Total	15	48	75	29	167

and a respondent staying within the points range, drinking six glasses of water every day, or eating five fruits and vegetables every day; therefore, the null hypotheses were accepted.

Occupation. It was expected there would be no relationship between occupation and following the weight loss program (staying within the points range, drinking six glasses of water every day, and eating five fruits and vegetables every day), and that was the null hypotheses for all three parts of the program. The alternate hypotheses were there was a relationship between occupation and following the program. The results of the tests for points (χ^2 = 17.200, p = .070), water (χ^2 = 16.977, p = .320) and fruits/vegetables (χ^2 = 12.369, p = .651) indicated there were no relationships between occupation and a respondent staying within the points range, drinking six glasses of water every day, or eating five fruits and vegetables every day; therefore, the null hypotheses were accepted.

Marital status. It was expected there would be no relationship between marital status and following the weight loss program (staying within the points range, drinking six glasses of water every day, and eating five fruits and vegetables every day), and that was the null hypotheses for all three parts of the program. The alternate hypotheses were there was a relationship between martial status and following the program. The results of the tests for points (χ^2 = 5.572, p = .062), water (χ^2 = 2.753, p = .431) and fruits/vegetables (χ^2 = 5.159, p = .161)

indicated there were no relationships between marital status and a respondent staying within the points range, drinking six glasses of water every day, or eating five fruits and vegetables every day; therefore, the null hypotheses were accepted.

Hypothesis 6C: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and staying for the meeting. Gamma was used to test the demographic variables of age, income, and education (items 72, 73, and 76) against how often an individual stayed for the Weight Watchers® meetings (item 24). Chi-square was used to test the demographic variables occupation and marital status (items 75 and 77) against how often an individual stayed for the Weight Watchers® meetings (item 24).

Age. It was expected there would be no relationship between age and staying for meetings. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma \neq 0$. The results of the test (γ = .028, p = .740) indicated there was no relationship between age and how often a respondent stayed for meetings; therefore, the null hypothesis was accepted.

Income. It was expected there would be no relationship between level of income and staying for meetings. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma \neq 0$. The results of the test (γ = .000, p = .997) indicated there was no relationship between income and how often a respondent stayed for meetings; therefore, the null hypothesis was accepted.

Education. It was expected there would be no relationship between education level and staying for meetings. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma \neq 0$. The results of the test (γ = -.143, p = .112) indicated there was no relationship between education level and how often a respondent stayed for meetings; therefore, the null hypothesis was accepted.

Occupation. It was expected there would be no relationship between type of occupation and staying for meetings and that was the null hypothesis. The alternate hypothesis was there would be a relationship between occupation and staying for meetings. The results of the test (χ^2 = 16.825, p = .664), indicated there was no relationship between occupation and how often a respondent stayed for meetings; therefore, the null hypothesis was accepted.

Marital status. It was expected there would be no relationship between marital status and staying for meetings and that was the null hypothesis. The alternate hypothesis was there would be a relationship between marital status and staying for meetings. The results of the test

(χ^2 = 2.541, p = .637), indicated there was no relationship between marital status and how often a respondent stayed for meetings; therefore, the null hypothesis was accepted.

Hypothesis 6D: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and other weight loss activities. Chi-square was used to test the demographic variables of age, income, occupation, education, and marital status (items 72, 73, and 75-77) against whether or not an individual supplemented the weight loss program with additional appearance management activities.

It was expected there would be no relationship between any of the demographic variables and other weight reduction activities and that was the null hypothesis for all of the demographic variables. The alternate hypotheses were there would be a relationship between demographics and other weight loss activities. The results of the tests for age (χ^2 = .949, p = .967), income (χ^2 = 3.815, p = .576), education (χ^2 = 3.465, p = .483), occupation (χ^2 = 8.572, p = .127), and marital status (χ^2 = .004, p = .950) indicated there was no relationship between any of the demographic variables and other weight reduction activities; therefore, the null hypotheses were all accepted. Age, income, occupation, education, or marital status were not related to whether or not a respondent supplemented the weight loss program with additional appearance management activities.

Summary of Hypothesis 6. This hypothesis tested the relationship between demographics and appearance management. It was hypothesized there would be a positive relationship between age and length of time in the weight loss program and income and length of time in the weight loss program, but no relationships between the rest of the demographic variables and length of time.

Results of the statistical testing indicated a positive relationship between age and length of time in the weight loss program (i.e., older respondents had been in the program longer). Results also indicated that respondents' length of time in the weight loss program differed by education level, but not in a consistent manner (respondents in high school and those with a graduate degree had been in the program longer). There were no relationships indicated between income, occupation, or marital status and the length of time in the weight loss program. In the present study, length of time in the weight loss program was a measure of appearance management; therefore, these findings correspond to the findings of Adame et al. (1990) who found that age and education were related to exercise involvement, which included time spent exercising (a measure of appearance management).

It was hypothesized there would be no relationships between any of the demographic variables and following the weight loss program, staying for the meetings, or participation in

other activities. Results of the statistical testing indicated no relationship between demographics and staying for the meetings or between demographics and other weight loss activities.

Results indicated no relationship between the demographic variables of income, education, occupation or marital status and following the weight loss program. Results showed no relationship between age and two parts of following the weight loss program (staying within the points range and drinking six glasses of water every day) but did indicate a positive relationship between age and eating fruits and vegetables. Respondents who were older stated they more often ate five fruits and vegetables every day than younger respondents.

Out of the 30 tests conducted to examine the relationship between demographics and appearance management, 27 indicated acceptance of the individual null hypotheses and three indicated rejection of the individual null hypotheses. Therefore, results indicate minimal support for Hypothesis 6.

Hypothesis 7. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and created appearance.*

The questionnaire items that were used included those related to demographics (items 72, 73, and 75-77) and created appearance (items 18-20). Demographics that were used in statistical analysis included age, income, occupation, education, and marital status. Because 96.5 percent of the sample indicated their racial/ethnic group was Caucasian, this item was not included in the analysis. One-way ANOVA, t-tests, and chi-square were used to determine the relationship between the variables. The results of the two sub-hypotheses are presented. All rejection levels were set at the .05 significance level.

Hypothesis 7A: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and percentage of weight loss. One-way ANOVA with a test for linear trend was used to test the demographic variables age, income, and education (items 72, 73, and 76) against the percentage of weight loss (item 19 divided by item 18). One-way ANOVA was used to test the demographic variable occupation (item 75) against the percentage of weight loss (item 19 divided by item18). A t-test was used to test the demographic variable of marital status (item 77) against the percentage of weight loss (item 19 divided by item 18).

Age. It was expected there would be no relationship between age and the percentage of weight loss. Therefore the null hypothesis was there was no difference between the six age groups ($\mu_1 = \mu_2 = \ldots \mu_6$). The alternate hypothesis was that at least one mean differed. The results of the test ($p = .201$) indicated the six age groups did not differ significantly and the null

hypothesis was accepted. There was not a relationship between age and respondents' percentage of weight loss.

Income. It was expected there would no relationship between level of income and the percentage of weight loss. Therefore, the null hypothesis was there was no difference between the income groups ($\mu_1 = \mu_2 = \ldots \mu_6$). The alternate hypothesis was that at least one mean differed. The results of the test ($p = .276$) indicated the six income groups did not differ significantly and the null hypothesis was accepted. There was not a relationship between level of income and respondents' percentage of weight loss.

Education. It was expected that there would be no relationship between education level and the percentage of weight loss. Therefore, the null hypothesis was there was no difference between the education groups ($\mu_1 = \mu_2 = \ldots \mu_5$). The alternate hypothesis was that at least one mean differed. The results of the test ($p = .032$) indicated the five income groups did differ significantly and the null hypothesis was rejected. There was a relationship between education level and respondents' percentage of weight loss.

To test whether the differences followed a consistent pattern, a test for linear trend was performed. The null hypothesis was there was no linear trend. The results of the test ($p = .016$) indicated the differences do follow a consistent pattern; therefore, the null hypothesis was rejected. An examination of the means plot indicated there was a positive linear trend. Therefore, percentage of weight loss increased with the education level of the respondents; in other words, those who were more educated had a higher percentage of weight loss (see Figure 8).

Occupation. It was expected there would be no relationship between occupation and the percentage of weight loss. Therefore, the null hypothesis was there was no difference between the different occupations ($\mu_1 = \mu_2 = \ldots \mu_6$). The alternate hypothesis was that at least one mean differed. The results of the test ($p = .513$) indicated the six occupation groups did not differ significantly and the null hypothesis was accepted. There was not a relationship between occupation and respondents' percentage of weight loss.

Marital status. It was expected there would be no relationship between marital status and percentage of weight loss. Therefore, the null hypothesis was there was no difference between the two groups ($\mu_1 = \mu_2$). The alternate hypothesis was $\mu_1 \neq \mu_2$. The results of the test ($t = 2.251$, $p = .026$) indicated there was a significant difference and the null hypothesis was rejected. An examination of the means indicated that those who were married stated they had a higher percentage of weight loss than those who were not married (see Table 67).

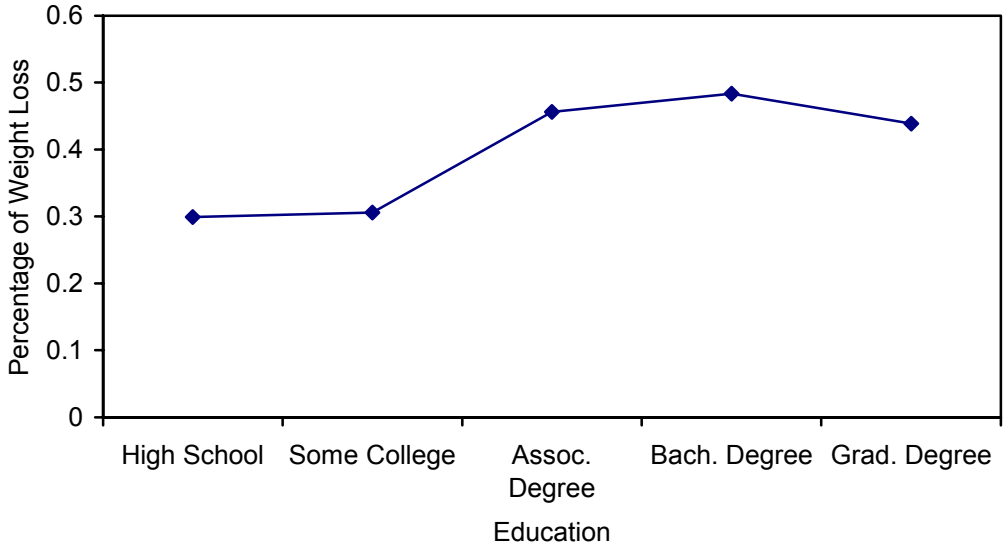

Figure 8. Means plot for level of education and percentage of weight loss.

Table 67

Mean ranks for marital status and percentage of weight loss

Marital Status	N	Mean Ranks for Percentage Of Weight Loss
Married	120	.42096
Unmarried	48	.30861

Hypothesis 7B: Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and noticeable weight loss. Chi-square was used to test the demographic variables of age, income, occupation, education, and marital status (items 72, 73, and 75-77) against the areas of noticeable weight loss (item 20).

Age. It was expected there would be no relationship between age and a noticeable weight loss in any of the body areas, and that was the null hypothesis for all of the body areas. The alternate hypotheses for all of the body areas was there would be relationship between age and a noticeable weight loss. The results of the tests for a noticeable weight loss in the face (χ^2 = .948, p = .967), hips (χ^2 = 8.305, p = .140), thighs (χ^2 = 1.627, p = .898), buttocks (χ^2 = 2.122, p = .832), legs (χ^2 = 4.275, p = .511), waist (χ^2 = 10.868, p = .054), stomach or abdomen (χ^2 = 4.593, p = .467), bust or breasts (χ^2 = 3.622, p = .605), and arms (χ^2 = 2.601,

p = .761) all indicated there were no relationships between age and a noticeable weight loss in any of the body areas; therefore, the null hypotheses were all accepted.

Income. It was expected there would be no relationship between income and any of the body areas, and that was the null hypothesis for all of the body areas. The alternate hypotheses for all of the body areas was there would be relationship between age and a noticeable weight loss. The results of the tests for a noticeable weight loss in the face (χ^2 = .6.292, p = .279), hips (χ^2 = 4.275, p = .511), thighs (χ^2 = 5.351, p = .375), buttocks (χ^2 = 4.544, p = .474), legs (χ^2 = 3.267, p = .359), waist (χ^2 = 3.913, p = .562), stomach or abdomen (χ^2 = 1.933, p = .858), bust or breasts (χ^2 = 2.874, p = .719), and arms (χ^2 = 4.747, p = .448) all indicated there were no relationships between income and a noticeable weight loss in any of the body areas; therefore, the null hypotheses were all accepted.

Education. It was expected there would be no relationship between education level and any of the body areas, and that was the null hypothesis for all the body areas. The alternate hypotheses for all of the body areas was there would be relationship between age and a noticeable weight loss. The results of the tests for a noticeable weight loss in the face (χ^2 = 1.736, p = .784), hips (χ^2 = 2.277, p = .685), buttocks (χ^2 = 8.984, p = .061), legs (χ^2 = 7.727, p = .102), waist (χ^2 = 3.726, p = .444), stomach or abdomen (χ^2 = 5.475, p = .242), bust or breasts (χ^2 = 4.541, p = .338), and arms (χ^2 = 4.215, p = .378) all indicated there were no relationships between education and any of these body areas; therefore, the null hypotheses were all accepted. The results of the test for a noticeable weight loss in the thighs (χ^2 = 16.116, p = .003) indicated there was a relationship between education and a loss in the thighs; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that respondents with a bachelor's degree indicated they had a noticeable weight loss in the thighs more than respondents with other levels of education (see Table 68).

Occupation. It was expected there would be no relationship between type of occupation and any of the body areas, and that was the null hypothesis for all the body areas. The alternate hypotheses for all of the body areas was there would be relationship between age and a noticeable weight loss. The results of the tests for a noticeable weight loss in the face (χ^2 = 7.392, p = .193), hips (χ^2 = 2.763, p = .737), thighs (χ^2 = 4.342, p = .501), buttocks (χ^2 = 10.511, p = .062), legs (χ^2 = 2.109, p = .834), stomach or abdomen (χ^2 = 5.190, p = .393), bust or breasts (χ^2 = 7.681, p = .175), and arms (χ^2 = 1.955, p = .855) all indicated there were no relationships between occupation and any of these body areas; therefore, the null hypotheses were all accepted. The results of the test for a noticeable weight loss in the waist

Table 68

Frequency of responses for level of education and loss in thighs

Education	Noticeable Loss In Thighs	No Noticeable Loss in Thighs	Total
High School	1	29	30
Some College	3	46	49
Associate's Degree	3	17	20
Bachelor' Degree	14	30	44
Graduate Degree	4	21	25
Total	25	143	168

(χ^2 = 11.481, p = .043) indicated there was a relationship between occupation and a loss in the waist; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that those who listed their occupation as student, secretary/clerical, or professional indicated they had a noticeable weight loss in the waist more than respondents who listed managerial, retired, or not employed as their occupation (see Table 69).

Table 69

Frequency of responses for occupation and loss in waist

Occupation	Noticeable Loss In Waist	No Noticeable Loss in Waist	Total
Student	10	17	27
Managerial	3	12	15
Retired	0	16	16
Secretary/Clerical	11	22	33
Professional	12	69	48
Not employed	8	9	17
Total	44	112	156

Marital status. It was expected there would be no relationship between marital status and any of the body areas, and that was the null hypothesis for all the body areas. The alternate

hypotheses for all of the body areas was there would be relationship between age and a noticeable weight loss. The results of the tests for a noticeable weight loss in the face (χ^2 = .117, p = .732), hips (χ^2 = 2.829, p = .093), thighs (χ^2 = .301, p = .583), buttocks (χ^2 = .377, p = .539), legs (χ^2 = .005, p = .945), waist (χ^2 = 1.271, p = .260), stomach or abdomen (χ^2 = .124, p = .724), bust or breasts (χ^2 = 1.067, p = .302), and arms (χ^2 = 1.174, p = .279) all indicated there were no relationships between marital status and a noticeable weight loss in any of the body areas; therefore, the null hypotheses were all accepted.

Summary of Hypothesis 7. This hypothesis tested the relationship between demographics and created appearance. It was hypothesized there would be no relationships between any of the demographic variables and created appearance. Results of the statistical testing indicated there were no relationships between percentage of weight loss and age, income, and occupation. Married respondents had a greater percentage of weight loss than those who were not married. Results also indicated a positive relationship between education and percentage of weight loss (i.e., respondents who were more educated had a greater percentage of weight loss than other respondents). In Tatarka's 1995 study, created appearance was also related to the level of education of respondents.

Results indicated no relationships between a noticeable weight loss in a body area and age, income, and marital status. Respondents who listed their occupation as student, secretary/clerical or professional stated they had a noticeable weight loss in the waist more than respondents who listed other occupations. Respondents with a bachelor's degree stated they had a noticeable weight loss in the thighs more than respondents with other levels of education.

Out of the 50 tests conducted to examine the relationship between demographics and created appearance, 46 indicated acceptance of the individual null hypotheses and four indicated rejection of the individual null hypotheses. Therefore, results indicate minimal support for Hypothesis 7.

Hypothesis 8. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and body cathexis.*

The questionnaire items that were used included those related to demographics (items 72, 73, and 75-77) and the average body cathexis score ([sum of items 1-16] divided by 16). Demographics that were used in statistical analysis included age, income, occupation, education, and marital status. Because 96.5 percent of the sample indicated their racial/ethnic group was Caucasian, this item was not included in the analysis. Gamma and chi-square were

used to determine the relationship between the variables. All rejection levels were set at the .05 significance level.

Gamma was used to test the demographic variables of age, income, and education (items 72, 73, and 76) against the average body cathexis score ([sum of items 1-16] divided by 16). Chi-square was used to test the demographic variables of occupation and marital status (item 75 and 77) against the average body cathexis score ([sum of items 1-16] divided by 16).

Age. It was expected there would be no relationship between age and the average body cathexis score. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma \neq 0$. The results of the test (γ = .084, p = .192) indicated there was no relationship between the age and a respondent's average body cathexis score; therefore, the null hypothesis was accepted.

Income. It was expected there would be no relationship between level of income and the average body cathexis score. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma \neq 0$. The results of the test (γ = .101, p = .134) indicated there was no relationship between income and a respondent's average body cathexis score; therefore, the null hypothesis was accepted.

Education. It was expected there would be no relationship between education level and the average body cathexis score. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma \neq 0$. The results of the test (γ = -.118, p = .071) indicated there was no relationship between education level and a respondent's average body cathexis score; therefore, the null hypothesis was accepted.

Occupation. It was expected there would be no relationship between type of occupation and average body cathexis score and that was the null hypothesis. The alternate hypothesis was there would be a relationship between occupation and average body cathexis score. The results of the test (χ^2 = 162.693, p = .643), indicated there was no relationship between occupation and a respondent's average body cathexis score; therefore, the null hypothesis was accepted.

Marital status. It was expected there would be no relationship between marital status and average body cathexis score and that was the null hypothesis. The alternate hypothesis was there would be a relationship between marital status and average body cathexis score. The results of the test (χ^2 = 25.116, p = .866), indicated there was no relationship between marital status and a respondent's average body cathexis score; therefore, the null hypothesis was accepted.

Summary of Hypothesis 8. This hypothesis tested the relationship between demographics and body cathexis. It was hypothesized there would be no relationships between any of the demographic variables and body cathexis, and results of the statistical testing indicated there were no relationships between demographics and the average body cathexis score. While previous studies found a relationship between demographics and body image (Cash et al., 1986, Hamilton & Chowdhary, 1989; Hwang, 1993; Tatarka, 1995), the present study found no relationships. As noted earlier, the majority (76.0%) of respondents had an average body cathexis score in the 2.0-2.9 range, indicating dissatisfaction. Out of the five tests conducted to examine the relationship between demographics and body cathexis, all five indicated acceptance of the individual null hypotheses. Therefore, results indicate no support for Hypothesis 8.

Hypothesis 9. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and current clothing behavior.*
The questionnaire items that were used included those related to demographics (items 72, 73, and 75-77) and current clothing behavior (items 26-48). Demographics that were used in statistical analysis included age, income, occupation, education, and marital status. Because 96.5 percent of the sample indicated their racial/ethnic group was Caucasian, this item was not included in the analysis. Gamma and chi-square were used to determine the relationship between the variables. All rejection levels were set at the .05 significance level.

Gamma was used to test the demographic variables of age, income, and education (items 72, 73, and 76) against the current clothing behavior (items 26-48). Chi-square was used to test the demographic variables of occupation and marital status (items 75 and 77) against the current clothing behavior (items 26-48).

Age. *Loose fitting clothing*. It was expected there would be a positive relationship between age and wearing clothing that was loose fitting; that is, it was expected that older respondents would indicate they wore loose fitting clothing with more frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .032$, $p = .355$) indicated there was no relationship between age and wearing loose fitting clothing; therefore, the null hypothesis was accepted.

Tight fitting clothing. It was expected there would be a negative relationship between age and wearing clothing that was tight fitting; that is, it was expected that older respondents would indicate they wore tight fitting clothing with less frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of

the test (γ = -.194, p = .0105) indicated there was a relationship between age and wearing tight fitting clothing; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that older respondents stated they wore tight fitting clothing with less frequency than younger respondents (see Table 70).

Table 70

Frequency of responses for age and wearing tight fitting clothing

Age	Wearing Tight Fitting Clothing					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	3	3	5	0	0	11
21-29	3	10	16	4	1	34
30-39	5	9	14	2	0	30
40-49	7	13	11	3	1	35
50-59	7	21	8	3	0	39
60 or over	5	8	2	3	0	18
Total	30	64	56	15	2	167

Dark colored clothing. It was expected there would be no relationship between age and wearing dark colored clothing. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma \neq 0$. The results of the test (γ = -.036, p = .687) indicated there was no relationship between age and wearing dark colored clothing; therefore, the null hypothesis was accepted.

Bright colored clothing. It was expected there would be no relationship between age and wearing bright colored clothing. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma \neq 0$. The results of the test (γ = -.070, p = .420) indicated there was no relationship between age and wearing bright colored clothing; therefore, the null hypothesis was accepted.

Flat front pants. It was expected there would be a negative relationship between age and wearing flat front pants; that is, it was expected that older respondents would indicate they wore flat front pants with less frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.317, p = .000) indicated there was a relationship between age and wearing flat front pants; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that older respondents stated they wore flat front pants "Always" or "Most of the Time" with less frequency than younger respondents (see Table 71).

Table 71

Frequency of responses for age and wearing flat front pants

Age	Wearing Flat Front Pants					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	1	0	0	4	6	11
21-29	0	0	2	7	25	34
30-39	1	5	4	15	4	29
40-49	3	2	9	10	11	35
50-59	1	3	10	13	12	39
60 or over	0	2	6	6	3	17
Total	6	12	31	55	61	165

Pleated front pants. It was expected there would be a positive relationship between age and wearing pleated front pants; that is, it was expected that older respondents would indicate they wore pleated front pants with more frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .333, p = .000) indicated there was a relationship between age and wearing pleated front pants; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that older respondents stated they wore pleated front pants "Always" or "Most of the Time" with more frequency than younger respondents (see Table 72).

Table 72

Frequency of responses for age and wearing pleated front pants

Age	Wearing Pleated Front Pants					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	7	4	0	0	0	11
21-29	26	5	3	0	0	34
30-39	6	11	5	5	2	29
40-49	12	10	10	3	0	35
50-59	11	15	7	4	1	38
60 or over	3	7	5	2	0	17
Total	65	52	30	14	3	164

Unfitted dresses. It was expected there would be a positive relationship between age and wearing unfitted dresses; that is, it was expected that older respondents would indicate they wore unfitted dresses with more frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .163$, $p = .0275$) indicated there was a relationship between age and wearing unfitted dresses; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that older respondents stated they wore unfitted dresses with more frequency than younger respondents (see Table 73).

Fitted dresses. It was expected there would be a negative relationship between age and wearing fitted dresses; that is, it was expected that older respondents would indicate they wore fitted dresses with less frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test ($\gamma = -.074$, $p = .195$) indicated there was no relationship between age and wearing fitted dresses; therefore, the null hypothesis was accepted.

Table 73

Frequency of responses for age and wearing unfitted dresses

Age	Wearing Unfitted Dresses					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	1	4	4	1	1	11
21-29	9	7	6	7	5	34
30-39	3	3	10	12	2	30
40-49	1	7	14	10	2	34
50-59	1	2	17	16	3	39
60 or over	1	5	5	5	2	18
Total	16	28	56	51	15	166

Short skirts. It was expected there would be a negative relationship between age and wearing skirts that were above knee length; that is, it was expected that older respondents would indicate they wore short skirts with less frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.402, p = .000) indicated there was a relationship between age and wearing shorts skirts; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that older respondents stated they wore skirts that were above knee length "Never" or "Rarely" with more frequency than younger respondents (see Table 74).

Long skirts. It was expected there would be a positive relationship between age and wearing skirts that were below knee length; that is, it was expected that older respondents would indicate they wore long skirts with more frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .367, p = .000) indicated there was a relationship between age and wearing long skirts; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that more older respondents stated they wore skirts that were below knee length with more frequency than younger respondents (see Table 75).

Table 74

Frequency of responses for age and wearing short skirts

Age	Wearing Short Skirts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	2	2	4	3	0	11
21-29	6	5	13	7	3	34
30-39	5	14	7	4	1	31
40-49	13	11	6	3	1	34
50-59	10	22	7	0	0	39
60 or over	11	4	3	0	0	18
Total	47	58	40	17	5	167

Table 75

Frequency of responses for age and wearing long skirts

Age	Wearing Long Skirts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	1	3	3	3	1	11
21-29	6	5	13	7	3	34
30-39	0	5	6	15	5	31
40-49	2	2	5	13	12	34
50-59	1	2	7	19	10	39
60 or over	1	0	2	9	6	18
Total	11	17	36	66	37	167

Straight skirts. It was expected there would be a negative relationship between age and wearing straight skirts; that is, it was expected that older respondents would indicate they wore straight skirts with less frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.105, p = .099) indicated there was no relationship between age and wearing straight skirts; therefore, the null hypothesis was accepted.

Full skirts. It was expected there would be a positive relationship between age and wearing full skirts; that is, it was expected that older respondents would indicate they wore full skirts with more frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = .169, p = .021) indicated there was a relationship between age and wearing full skirts; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that older respondents stated they wore full skirts with more frequency than younger respondents (see Table 76).

Table 76

Frequency of responses for age and wearing full skirts

Age	Wearing Full Skirts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	5	3	2	0	1	11
21-29	8	9	12	3	1	33
30-39	6	7	12	5	1	31
40-49	5	4	16	8	2	35
50-59	7	12	10	8	1	38
60 or over	4	2	5	6	1	18
Total	35	37	57	30	7	166

Elastic waist. It was expected there would be a positive relationship between age and wearing pants and skirts with a full or partial elastic waist; that is, it was expected that older

respondents would indicate they wore elastic waist pants and skirts with more frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = .600, p = .000) indicated there was a relationship between age and respondent's wearing elastic waist pants and skirts; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that older respondents stated they wore pants and skirts with a full or partial elastic waist with more frequency than younger respondents (see Table 77).

Table 77

Frequency of responses for age and wearing elastic waist pants and skirts

Age	Wearing Elastic Waist					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	6	4	1	0	0	11
21-29	18	9	7	0	0	34
30-39	5	14	7	5	0	31
40-49	4	7	19	2	3	35
50-59	2	6	16	11	4	39
60 or over	0	3	6	7	2	18
Total	35	43	56	25	9	168

Waistband. It was expected there would be a negative relationship between age and wearing pants and skirts with a waistband; that is, it was expected that older respondents would indicate they wore pants and skirts with a waistband with less frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.354, p = .000) indicated there was a relationship between age and wearing pants and skirts with a waistband; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that older respondents stated they wore pants and skirts with a waistband with less frequency than younger respondents (see Table 78).

Table 78

Frequency of responses for age and wearing pants and skirts with a waistband

Age	Wearing Waistband					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	1	1	1	3	5	11
21-29	2	0	6	13	13	34
30-39	0	4	11	11	5	31
40-49	3	2	7	15	8	35
50-59	3	8	13	13	2	39
60 or over	2	4	5	7	0	18
Total	11	19	43	62	33	168

Belt. It was expected there would be a negative relationship between age and wearing a belt with pants and skirts; that is, it was expected that older respondents would indicate they wore a belt with pants and skirts with less frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = -.142, p = .0415) indicated there was a relationship between age and wearing a belt; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that older respondents stated they wore a belt with pants and skirts with less frequency than younger respondents (see Table 79).

Long sleeves. It was expected there would be no relationship between age and wearing shirts, blouses, or sweaters that were long sleeved. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma \neq 0$. The results of the test (γ = .022, p = .832) indicated there was no relationship between age and wearing long sleeved shirts, blouses, or sweaters; therefore, the null hypothesis was accepted.

Short sleeves. It was expected there would be no relationship between age and wearing shirts, blouses, or sweaters that were short sleeved. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma \neq 0$. The results of the test (γ = -.044, p = .719)

Table 79

Frequency of responses for age and wearing a belt with pants and skirts

Age	Wearing Belts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	3	0	4	3	1	11
21-29	10	5	8	7	4	34
30-39	8	6	9	6	1	30
40-49	8	16	6	4	1	35
50-59	10	13	11	4	1	39
60 or over	4	7	5	2	0	18
Total	43	47	43	26	8	167

indicated there was no relationship between age and wearing short sleeved shirts, blouses, or sweaters; therefore, the null hypothesis was accepted.

Sleeveless. It was expected there would be a negative relationship between age and wearing shirts, blouses, or sweaters that were sleeveless; that is, it was expected that older respondents would indicate they wore sleeveless shirts, blouses, or sweaters with less frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.272, p = .0005) indicated there was a relationship between age and wearing sleeveless shirts, blouses, or sweaters; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that older respondents stated they wore shirts, blouses, or sweaters that were sleeveless with less frequency than younger respondents (see Table 80).

Tucked. It was expected there would be a negative relationship between age and wearing shirts, blouses, or sweaters tucked in; that is, it was expected that older respondents would indicate they wore shirts, blouses, or sweaters tucked in with less frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = .162, p = .9805) indicated there was no relationship

Table 80

Frequency of responses for age and wearing sleeveless tops

Age	Wearing Sleeveless Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	1	1	9	0	0	11
21-29	5	11	18	0	0	34
30-39	9	14	7	0	1	31
40-49	6	11	16	2	0	35
50-59	11	18	10	0	0	39
60 or over	7	7	4	0	0	18
Total	39	62	64	2	1	168

between age and wearing shirts, blouses, or sweaters that were tucked in; therefore, the null hypothesis was accepted.

Untucked. It was expected there would be a positive relationship between age and wearing shirts, blouses, or sweaters untucked; that is, it was expected that older respondents would indicate they wore shirts, blouses, or sweaters untucked with more frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test (γ = -.057, p = .7595) indicated there was no relationship between age and wearing shirts, blouses, or sweaters untucked; therefore, the null hypothesis was accepted.

Close-fitting tops. It was expected there would be a negative relationship between age and wearing shirts, blouses, or sweaters that were close-fitting; that is, it was expected that older respondents would indicate they wore close-fitting shirts, blouses, or sweaters with less frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma < 0$. The results of the test (γ = -.259, p = .0015) indicated there was a relationship between age and wearing close-fitting shirts, blouses, or sweaters; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that

older respondents stated they wore shirts, blouses, or sweaters that were close-fitting with less frequency than younger respondents (see Table 81).

Table 81

Frequency of responses for age and wearing close-fitting tops

Age	Wearing Close-fitting Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	1	0	6	3	1	11
21-29	1	6	18	9	0	34
30-39	2	16	12	1	0	31
40-49	3	11	16	5	0	35
50-59	4	15	17	2	0	38
60 or over	1	8	6	3	0	18
Total	12	56	75	23	1	167

Loose-fitting tops. It was expected there would be a positive relationship between age and wearing shirts, blouses, or sweaters that were loose-fitting; that is, it was expected that older respondents would indicate they wore loose-fitting shirts, blouses, or sweaters with more frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test ($\gamma = .168$, $p = .027$) indicated there was a relationship between age and wearing shirts, blouses, or sweaters that were loose-fitting; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that older respondents stated they wore shirts, blouses, or sweaters that were loose-fitting with more frequency than younger respondents (see Table 82).

Lower torso coverage. It was expected there would be a positive relationship between age and wearing shirts, blouses, or sweaters that cover the buttocks and hips; that is, it was expected that older respondents would indicate they wore shirts, blouses, or sweaters that cover the buttocks and hips with more frequency than younger respondents. Therefore, the null hypothesis was gamma (γ) = 0, and the alternate hypothesis was $\gamma > 0$. The results of the test

Table 82

Frequency of responses for age and wearing loose-fitting tops

Age	Wearing Loose-fitting Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	0	0	9	0	2	11
21-29	0	6	19	8	1	34
30-39	0	3	12	14	2	31
40-49	0	3	14	15	2	34
50-59	0	2	21	12	4	39
60 or over	0	0	10	6	2	18
Total	0	14	85	55	13	167

(γ = .316, p = .000) indicated there was a relationship between age and wearing shirts, blouses, or sweaters that cover the buttocks and hips; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that older respondents stated they wore shirts, blouses, or sweaters that cover the buttocks and hips with more frequency than younger respondents (see Table 83).

Income. It was expected there would be no relationship between income and any of the current clothing behavior items. Therefore, the null hypothesis for all the clothing behavior items was gamma (γ) = 0, and the alternate hypotheses were $\gamma \neq 0$. The results of the tests for loose fitting clothing (γ = -.100, p = .262), tight fitting clothing (γ = -.104, p = .278), dark colored clothing (γ = -.192, p = .056), bright colored clothing (γ = .127, p = .209), flat front pants (γ = -.086, p = .362), pleated front pants (γ = .107, p = .267), unfitted dresses (γ = -.066, p = .197), short skirts (γ = -.058, p = .560), long skirts (γ = .112, p = .258), full skirts (γ = -.174, p = .063), elastic waist (γ = -.177, p = .053), long sleeves (γ = .199, p = .052), short sleeves (γ = .003, p = .979), sleeveless (γ = .031, p = .757), tucked (γ = .108, p = .218), untucked (γ = -.079, p = .381), close-fitting tops (γ = .064, p = .515), loose-fitting tops (γ = -.152, p = .108), and lower torso coverage (γ = -.106, p = .236) indicated there were no relationships between

Table 83

Frequency of responses for age and wearing tops that cover lower torso

Age	Lower Torso Coverage					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Under 21	3	3	4	0	0	10
21-29	7	14	8	5	0	34
30-39	3	9	13	4	2	31
40-49	3	9	13	7	3	35
50-59	2	8	14	14	1	39
60 or over	0	5	8	3	2	18
Total	18	48	60	33	8	167

income and currently wearing these clothing behavior items. Therefore, the null hypotheses were all accepted.

The results of the test for fitted dresses (γ = .193, p = .041) indicated there was a relationship between income and wearing fitted dresses; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that those with an income level of $30,001 - $70,000 stated they wore fitted dresses with less frequency than respondents in all other income levels (see Table 84).

The results of the test for straight skirts (γ = .256, p = .004) indicated there was a relationship between income and wearing straight skirts; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that the frequency of wearing straight skirts increased as respondent's income level increased (see Table 85). Therefore, respondents with higher income levels wore straight skirts with more frequency than respondents with lower income levels.

Table 84

Frequency of responses for level of income and wearing fitted dresses

Income	Wearing Fitted Dresses					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
$10,000 or below	2	0	1	0	0	3
$10,001 to $30,000	5	1	6	4	1	17
$30,001 to $50,000	7	16	12	5	0	40
$50,001 to $70,000	7	14	12	4	1	38
$70,001 to $90,000	4	5	7	5	0	21
$90,001 or more	2	5	9	7	3	26
Total	27	41	47	25	5	145

Table 85

Frequency of responses for level of income and wearing straight skirts

Income	Wearing Straight Skirts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
$10,000 or below	1	0	2	0	0	3
$10,001 to $30,000	2	3	7	4	1	17
$30,001 to $50,000	4	7	12	14	4	41
$50,001 to $70,000	2	7	20	7	2	38
$70,001 to $90,000	1	1	9	8	1	20
$90,001 or more	0	2	7	14	4	27
Total	10	20	57	47	12	146

The results of the test for waistband (γ = .225, p = .013) indicated there was a relationship between income and wearing pants and skirts with a waistband; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that the frequency of wearing pants and skirts with a waistband increased as respondents' level of income increased (see Table 86). Therefore, respondents with higher income levels wore pants and skirts with a waistband with more frequency than respondents with lower income levels.

Table 86

Frequency of responses for level of income and wearing pants and skirts with a waistband

Income	Wearing Waistband					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
$10,000 or below	0	0	1	0	2	3
$10,001 to $30,000	1	1	6	6	3	17
$30,001 to $50,000	4	7	7	18	5	41
$50,001 to $70,000	2	2	18	12	4	38
$70,001 to $90,000	1	1	4	10	5	21
$90,001 or more	0	1	4	11	11	27
Total	8	12	40	57	30	147

The results of the test for belt (γ = .189, p = .046) indicated there was a relationship between income and wearing a belt with pants and skirts; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that the frequency of wearing a belt increased as respondents' level of income increased (see Table 87).

Education. It was expected there would be no relationship between education level and any of the current clothing behavior items. Therefore, the null hypothesis for all the clothing behavior items was gamma (γ) = 0, and the alternate hypotheses were $\gamma \neq 0$. The results of the tests for loose fitting clothing (γ = -.085, p = .362), tight fitting clothing (γ = .093, p = .303), dark colored clothing (γ = .161, p = .096), bright colored clothing (γ = -.147, p = .163), flat front pants (γ = -.022, p = .801) , pleated front pants (γ = .028, p = .735), unfitted dresses (γ = -.062,

Table 87

Frequency of responses for level of income and wearing a belt with pants and skirts

Income	Wearing Belts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
$10,000 or below	1	0	0	1	1	3
$10,001 to $30,000	4	3	6	3	0	16
$30,001 to $50,000	17	12	8	3	1	41
$50,001 to $70,000	6	16	10	5	1	38
$70,001 to $90,000	3	5	7	5	1	21
$90,001 or more	7	4	6	6	4	27
Total	38	40	37	23	8	146

p = .443), fitted dresses (γ = .017, p = .839), short skirts (γ = .104, p = .208), long skirts (γ = -.135, p = .099), straight skirts (γ = .049, p = .566), full skirts (γ = -.008, p = .928), elastic waist (γ = -.005, p = .953), waistband (γ = .092, p = .263), belt (γ = -.009, p = .919), short sleeves (γ = -.110, p = .434), sleeveless (γ = -.082, p = .354), tucked (γ = .025, p = .772), untucked (γ = -.010, p = .912), close-fitting tops (γ = .092, p = .338), loose-fitting tops (γ = -.139, p = .140), and lower torso coverage (γ = -.136, p = .111) indicated there were no relationships between the education and currently wearing these clothing behavior items. Therefore, the null hypotheses were all accepted.

The results of the test for long sleeves (γ = .306, p = .016) indicated there was a relationship between education and wearing shirts, blouses, or sweaters that were long sleeved; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that most respondents (72.46%) stated they “Sometimes” wore long-sleeved tops, and that those with a college degree stated they “Sometimes” wore long sleeved shirts, blouses, or sweaters with a higher frequency than respondents with less than a college degree (see Table 88). Therefore, respondents with a higher education level “Sometimes” wore shirts, blouses, or

sweaters that were long sleeved with more frequency than respondents with a lower level of education.

Table 88

Frequency of responses for level of education and wearing long sleeved tops

Education	Wearing Long Sleeved Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
High School	2	6	18	3	1	30
Some College	0	2	41	5	0	48
Associate's Degree	0	1	14	5	0	20
Bachelor's Degree	0	1	34	9	0	44
Graduate Degree	0	3	14	8	0	25
Total	2	13	121	30	1	167

Occupation. It was expected there would be no relationship between type of occupation and any of the current clothing behavior items; therefore, that was the null hypothesis for all the clothing behavior items. The alternate hypotheses were that there would be a relationship between occupation and the current clothing behavior items. The results of the tests for loose fitting clothing (χ^2 = 16.599, p = .679), tight fitting clothing (χ^2 = 23.127, p = .283), dark colored clothing (χ^2 = 24.549, p = .056), bright colored clothing (χ^2 = 20.052, p = .455), flat front pants (χ^2 = 20.850, p = .406), pleated front pants (χ^2 = 30.520, p = .062), unfitted dresses (χ^2 = 21.745, p = .355), fitted dresses (χ^2 = 21.574, p = .364), short skirts (χ^2 = 27.584, p = .120), long skirts (χ^2 = 24.001, p = .242), straight skirts (χ^2 = 19.749, p = .474), full skirts (χ^2 = 118.758, p = .538), waistband (χ^2 = 31.251, p = .052), belt (χ^2 = 27.762, p = .115), short sleeves (χ^2 = 21.815, p = .113), tucked (χ^2 = 16.884, p = .660), untucked (χ^2 = 19.226, p = .507), close-fitting tops (χ^2 = 23.619, p = .259), loose-fitting tops (χ^2 = 15.909, p = .388), and lower torso coverage (χ^2 = 29.967, p = .070) indicated there were no relationships between the education and currently wearing these clothing behavior items; therefore, the null hypotheses were all accepted..

The results of the test for elastic waist (χ^2 = 80.909, p = .000) indicated there was a relationship between occupation and wearing pants and skirts with a full or partial elastic waist; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that respondents who stated their occupation was student indicated they "Never" wore elastic waist pants and skirts with more frequency than other occupations (see Table 89). Those who stated their occupation was secretary/clerical or professional stated they "Sometimes" wore elastic waist pants and skirts with more frequency than respondents who listed other occupations.

Table 89

Frequency of responses for occupation and wearing elastic waist pants and skirts

Occupation	Wearing Elastic					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Student	18	6	3	0	0	27
Managerial	2	4	6	3	0	15
Retired	0	1	6	7	2	16
Secretary/clerical	5	4	15	3	6	33
Professional	6	16	19	6	1	48
Not employed	3	9	2	3	0	17
Total	34	40	51	22	9	156

The results of the test for long sleeves (χ^2 = 37.778, p = .009) indicated there was a relationship between occupation and wearing shirts, blouses, or sweaters that were long sleeved; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that most respondents (73.55%) indicated they "Sometimes" wore long sleeved tops, and that those who listed their occupation as student, secretary/clerical, or professional stated they "Sometimes" wore long sleeved shirts with more frequency than respondents who listed other occupations (see Table 90).

Table 90

Frequency of responses for occupation and wearing long sleeved tops

Occupation	Wearing Long Sleeved Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Student	0	1	24	1	1	27
Managerial	0	1	5	9	0	15
Retired	0	1	12	2	0	15
Secretary/clerical	1	1	27	4	0	33
Professional	0	6	31	11	0	48
Not employed	0	1	15	1	0	17
Total	1	11	114	28	1	155

The results of the test for sleeveless tops (χ^2 = 36.660, p = .013) indicated there was a relationship between occupation and wearing shirts, blouses, or sweaters that were sleeveless; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that respondents who stated their occupation was student or professional stated they "Sometimes" wore sleeveless shirts with more frequency than respondents who listed other occupations (see Table 91).

Marital status. It was expected there would be no relationship between marital status and any of the current clothing behavior items; therefore, that was the null hypothesis for all the clothing behavior items. The alternate hypotheses were that there would be a relationship between marital status and current clothing behavior. The results of the tests for loose fitting clothing (χ^2 = 5.475, p = .242), dark colored clothing (χ^2 = 4.851, p = .183), bright colored clothing (χ^2 = 1.277, p = .865), straight skirts (χ^2 = 4.169, p = .384), full skirts (χ^2 = 8.011, p = .091), waistband (χ^2 = 6.799, p = .147), belt (χ^2 = 3.843, p = .428), short sleeves (χ^2 = 3.961, p = .266), tucked (χ^2 = 7.650, p = .105), untucked (χ^2 = 3.360, p = .500), close-fitting tops (χ^2 = 7.964, p = .093), loose-fitting tops (χ^2 = 1.277, p = .735), and lower torso coverage

Table 91

Frequency of responses for occupation and wearing sleeveless tops

Occupation	Wearing Sleeveless Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Student	3	4	20	0	0	27
Managerial	4	10	1	0	0	15
Retired	7	6	3	0	0	16
Secretary/clerical	7	17	8	1	0	33
Professional	11	17	19	0	1	48
Not employed	4	5	8	0	0	17
Total	36	59	59	1	1	156

(χ^2 = 4.214, p = .378) indicated there were no relationships between marital status and currently wearing these clothing behavior items; therefore, the null hypotheses were all accepted.

The results of the test for tight fitting clothing (χ^2 = 11.701, p = .020) indicated there was a relationship between marital status and wearing clothing that was tight fitting; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that respondents who were married stated they wore tight fitting clothing with less frequency than respondents who were not married (see Table 92).

The results of the test for flat front pants (χ^2 = 21.237, p = .000) indicated there was a relationship between marital status and wearing flat front pants; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that more respondents who were married stated they wore flat front pants with less frequency than respondents who were not married (see Table 93).

Table 92

Frequency of responses for marital status and wearing tight fitting clothing

Marital Status	Wearing Tight Fitting Clothing					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Married	21	52	34	12	0	119
Unmarried	9	12	22	3	2	48
Total	30	64	56	15	2	167

Table 93

Frequency of responses for marital status and wearing flat front pants

Marital Status	Wearing Flat Front Pants					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Married	4	12	30	36	35	117
Unmarried	2	0	1	19	26	48
Total	6	12	31	55	61	165

The results of the test for pleated front pants (χ^2 = 27.496, p = .000) indicated there was a relationship between marital status and wearing pleated front pants; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that more respondents who were married stated they wore pleated front pants with more frequency than respondents who were not married (see Table 94).

Table 94

Frequency of responses for marital status and wearing pleated front pants

Marital Status	Wearing Pleated Front Pants					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Married	34	36	29	14	3	116
Unmarried	31	16	1	0	0	48
Total	65	52	30	14	3	164

The results of the test for unfitted dresses (χ^2 = 11.200, p = .024) indicated there was a relationship between marital status and wearing unfitted dresses; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that more respondents who were married stated they wore unfitted dresses with more frequency than respondents who were not married (see Table 95).

Table 95

Frequency of responses for marital status and wearing unfitted dresses

Marital Status	Wearing Unfitted Dresses					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Married	7	19	40	43	9	118
Unmarried	9	9	16	8	6	48
Total	16	28	56	51	15	168

The results of the test for fitted dresses (χ^2 = 11.376, p = .023) indicated there was a relationship between marital status and wearing fitted dresses; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that more respondents

who were married stated they wore fitted dresses with less frequency than respondents who were not married (see Table 96).

Table 96

Frequency of responses for marital status and wearing fitted dresses

Marital Status	Wearing Fitted Dresses					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Married	18	39	41	18	2	118
Unmarried	12	6	15	12	3	48
Total	30	45	56	30	5	166

The results of the test for short skirts (χ^2 = 22.160, p = .000) indicated there was a relationship between marital status and wearing skirts that were above knee length; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that more respondents who were married stated they wore short skirts with less frequency than respondents who were not married (see Table 97).

Table 97

Frequency of responses for marital status and wearing short skirts

Marital Status	Wearing Short Skirts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Married	34	49	29	6	1	119
Unmarried	13	9	11	11	4	48
Total	47	58	40	17	5	167

The results of the test for long skirts (χ^2 = 23.328, p = .000) indicated there was a relationship between marital status and wearing skirts that were below knee length; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that more respondents who were married stated they wore long skirts with more frequency than respondents who were not married (see Table 98).

Table 98

Frequency of responses for marital status and wearing long skirts

Marital Status	Wearing Long Skirts					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Married	2	9	25	51	32	119
Unmarried	9	8	11	15	5	48
Total	11	17	36	66	37	167

The results of the test for elastic waist (χ^2 = 19.094, p = .001) indicated there was a relationship between marital status and wearing pants and skirts with a full or partial elastic waist; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that more respondents who were married stated they wore elastic waist pants and skirts with less frequency than respondents who were not married (see Table 99).

The results of the test for long sleeves (χ^2 = 9.750, p = .045) indicated there was a relationship between marital status and wearing shirts, blouses, or sweaters that were long sleeved; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that more respondents who were married stated they wore long sleeved shirts, blouses, or sweaters with more frequency than respondents who were not married (see Table 100).

Table 99

Frequency of responses for marital status and wearing elastic waist pants and skirts

Marital Status	Wearing Elastic Waist					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Married	15	33	46	18	8	120
Unmarried	20	10	10	7	1	48
Total	35	43	56	25	9	168

Table 100

Frequency of responses for marital status and wearing long sleeved tops

Marital Status	Wearing Long Sleeved Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Married	2	8	82	27	0	119
Unmarried	0	5	39	3	1	48
Total	2	13	121	30	1	167

The results of the test for sleeveless ($\chi^2 = 11.701$, $p = .020$) indicated there was a relationship between marital status and wearing shirts, blouses, or sweaters that were sleeveless; therefore, the null hypothesis was rejected. An examination of the frequency of responses indicated that more respondents who were married stated they wore sleeveless shirts, blouses, or sweaters with less frequency than respondents who were not married (see Table 101).

Table 101

Frequency of responses for marital status and wearing sleeveless tops

Marital Status	Wearing Sleeveless Tops					Total
	Never	Rarely	Sometimes	Most of the Time	Always	
Married	32	49	36	2	1	120
Unmarried	7	13	28	0	0	48
Total	39	62	64	2	1	168

Summary of Hypothesis 9. This hypothesis tested the relationship between demographics and current clothing behavior. For age, the direction of the hypothesized relationship was dependent on the clothing behavior. For example, it was hypothesized that older respondents would indicate they wore tight fitting clothing with less frequency and loose fitting clothing with more frequency than younger respondents. Results of the statistical testing indicated that older respondents wore the following clothing items with more frequency than younger respondents: pleated front pants; unfitted dresses; long skirts; full skirts; elastic waist pants and skirts; and shirts, blouses, or sweaters that were loose-fitting or cover the buttocks and hips.

Results indicated that younger respondents wore the following clothing items with more frequency than older respondents: tight fitting clothing; flat front pants; short skirts; pants and skirts with a waistband; a belt with pants and skirts; sleeveless shirts, blouses, or sweaters; and close-fitting shirts, blouses, or sweaters.

It was hypothesized there would be no relationship between the clothing behavior items and income, education, occupation, and marital status. Results indicated that respondents with a mid-range salary indicated they wore fitted dresses with less frequency, and that those with a higher income stated they wore straight skirts, pants and skirts with a waistband, and belts with pants and skirts with more frequency than respondents in other income brackets.

Results indicated that respondents who stated their occupation was student indicated they “Never” wore elastic waist pants and skirts with more frequency than other occupations. Those who stated their occupation was secretary/clerical or professional stated they “Sometimes” wore elastic waist pants and skirts with more frequency than respondents who

listed other occupations. Those who listed their occupation as student, secretary/clerical, or professional stated they “Sometimes” wore long sleeved tops with more frequency than respondents who listed other occupations, and respondents who stated their occupation was student or professional stated they “Sometimes” wore sleeveless tops with more frequency than respondents who listed other occupations.

Those who were married indicated they wore the following clothing items with more frequency than those who were not married: pleated front pants; unfitted dresses; long skirts; and long sleeved shirts, blouses, or sweaters. Married respondents indicated they wore the following items with less frequency than unmarried respondents: tight fitting clothing; flat front pants; fitted dresses; short skirts; elastic waist pants and skirts; and sleeveless shirts, blouses, or sweaters.

These findings correspond to previous studies (Dardis et al., 1981; Norum, 1989) that found a relationship between clothing expenditures and demographic variables of age, marital status and education. Out of the 114 tests conducted to examine the relationship between demographics and current clothing behavior, 82 indicated acceptance of the individual null hypotheses and 32 indicated rejection of the individual null hypotheses. Therefore, results indicate minimal support for Hypothesis 9.

Discussion of the Research Model

The proposed research model hypothesized that the following variables would be related: appearance management and created appearance, created appearance and body cathexis, body cathexis and current clothing behavior, and created appearance and current clothing behavior. Statistical testing indicated partial support for the four research hypotheses associated with the model.

Appearance management and created appearance. It was hypothesized there would be a positive relationship between appearance management and created appearance; that is, the time and effort involved in a weight loss program (measured by the length of time in the weight loss program, how often one stays for meetings, and how diligently one follows the prescribed plan) would be positively related to created appearance (the change in one’s appearance that is achieved through weight loss). Appearance management was found to be positively related to created appearance in that individuals who had been in the weight loss program longer did indicate a greater weight loss. Table 102 shows significant test results for these variables.

Created appearance and body cathexis. It was hypothesized there would be a positive relationship between created appearance and body cathexis; that is, created appearance

Table 102

Significant test results for appearance management and created appearance

Test	Test Statistic	P-value
Length of time in program and percentage of weight loss	r = .254	.000

Note: All significant levels were set at the .05 level.

(measured by the percentage of weight loss and where noticeable weight losses had occurred) would be positively related to body cathexis (measured by the average body cathexis score, as well as body cathexis scores for individual body parts and features). The percentage of weight loss was found to be positively related to an individual's average body cathexis score; therefore, the more weight an individual had lost, the more satisfied she was with her body. These findings correspond to the findings of other studies that found that successful weight loss was positively related to an increased body image (Cash, 1993; Cash, 1994; Leon, 1976; Loftis, 1981).

A positive relationship was indicated for a noticeable weight loss in the arms and the body cathexis score for arms. Individuals who stated they had a noticeable weight loss in the arms were more satisfied with their arms than those who had not indicated a noticeable weight loss in the arms. No relationships were found between a noticeable weight loss in any other body area and the corresponding body cathexis score. Table 103 shows significant test results for these variables.

Table 103

Significant test results for created appearance and body cathexis

Test	Test Statistic	P-value
Percentage of weight loss and average body cathexis score	r = .390	.000
Noticeable loss in arms and body cathexis score for arms	Z = -2.002	.0215

Note: All significant levels were set at the .05 level.

Body cathexis and current clothing behavior. It was hypothesized there would be a relationship between body cathexis and current clothing behavior; that is, the individual body cathexis scores for various body parts would be related to the frequency with which an individual wore certain clothing items or styles. Relationships were found between clothing

behavior and the body cathexis scores for hips, thighs, buttocks, legs, waist, stomach or abdomen, shoulders, arms, muscle tone, and weight. Certain clothing behaviors were associated with satisfaction with body areas. For example, respondents who were more satisfied with the hips and buttocks indicated they wore tops that covered the lower torso with less frequency than those who were less satisfied. Those who were more satisfied with the hips also wore straight skirts with more frequency that those who were less satisfied. Respondents who were less satisfied with the hips and thighs wore fitted dresses with less frequency than those who were more satisfied. Those who were less satisfied with the waist wore belts with pants and skirts with less frequency and wore tops that were tucked in with less frequency than those who were more satisfied. These findings correspond to the findings of Ogle (1999) and Kwon and Parham (1994) who found that women used clothing to enhance body parts with which they were more satisfied. Table 104 shows significant test results for these variables.

Created appearance and current clothing behavior. It was hypothesized there would be a relationship between created appearance and current clothing behavior; that is, having a noticeable weight loss in a certain body area would be related to wearing certain clothing items or styles. Having a noticeable weight loss in the face, hips, thighs, and waist were all related to wearing certain clothing items or styles. For example, respondents who had lost weight in the hips and thighs did not wear unfitted dresses with more frequency. Those who had lost weight in the waist wore pants and skirts with a waistband with more frequency. Table 105 shows significant test results for these variables.

Table 104

Significant test results for body cathexis and clothing behavior

Test	Gamma	P-value
Hips and Fitted dresses	.178	.0425
Hips and Straight skirts	.187	.0255
Hips and Full skirts	-.177	.0345
Hips and Lower torso coverage	-.167	.038
Thighs and Fitted dresses	.178	.0405
Buttocks and Tucked in tops	.167	.0465
Buttocks and Lower torso coverage	-.188	.028
Legs and Long skirts	-.179	.046
Waist and Elastic waist	-.196	.023
Waist and Belt	.317	.000
Waist and Tucked in tops	.344	.000
Waist and Untucked tops	-.371	.000
Stomach and Unfitted dresses	-.368	.000
Stomach and Fitted dresses	.236	.009
Stomach and Elastic waist	-.184	.034
Stomach and Belt	.315	.000
Stomach and Tucked in tops	.361	.000
Stomach and Untucked tops	-.369	.000
Shoulders and Sleeveless tops	.242	.0205
Arms and Sleeveless tops	.322	.002
Muscle tone and Sleeveless tops	.252	.014
Weight and Loose fitting clothing	-.220	.0185
Weight and Tight fitting clothing	.275	.0015
Weight and Short skirts	.239	.0115
Weight and Close-fitting tops	.214	.0265
Weight and Loose-fitting tops	-.386	.0005

Note: All significant levels were set at the .05 level.

Table 105

Significant test results for created appearance and clothing behavior

Test	Z	P-value
Noticeable loss in face and Bright colored clothing	-1.647	.05
Noticeable loss in hips and Unfitted dresses	-1.860	.0315
Noticeable loss in thighs and Unfitted dresses	-2.667	.004
Noticeable loss in waist and Elastic waist	-3.987	.000
Noticeable loss in waist and Waistband	-3.293	.0005

Note: All significant levels were set at the .05 level.

CHAPTER SIX

Summary, Conclusions, Implications, and Recommendations

The purpose of this study was to determine the relationship between appearance management, created appearance, body cathexis, and clothing behavior for a group of women enrolled in a commercial weight loss program. The objectives were to measure appearance management, created appearance, body cathexis, and clothing behavior for a sample of women enrolled in a commercial weight loss program, as well as to obtain demographic information for the sample, and to determine the relationship between those variables. Subjects were females who were enrolled in Weight Watchers® programs in Southwestern Virginia.

Summary

Being overweight has been related to greater body dissatisfaction and a decreased body image (Cash & Green, 1986; Cash & Hicks, 1990). In American society, women are particularly susceptible to body dissatisfaction because of the greater importance attached to their appearance, and in particular to their thinness (Garner et al., 1980). Many women view their own body size and weight as excessive and unacceptable (Fallon & Rozin, 1985; Matz et al., 2002). As a result, women are more likely to diet, seek slenderizing clothing, and to express anxiety about their weight (Rodin et al., 1985).

Being overweight has been related to greater body dissatisfaction and a decreased body image (Cash & Green, 1986; Cash & Hicks, 1990). The attainment of a more satisfying body image is a central motivation for weight loss (Cash & Hicks, 1990). Research has demonstrated that successful weight loss has been positively related to an increased body image (Cash, 1993; Cash, 1994; Leon, 1976; Loftis, 1981); however, these studies did not examine clothing behavior and its possible effect on body image.

Research has shown that women can use clothing as a means of improving their appearance and consequently their self-esteem (Joyner, 1993; Kwon, 1997). Therefore, women who are dissatisfied with their bodies and are dieting to lose weight may use clothing to compensate for their dissatisfaction by enhancing their appearance and temporarily improving their body image. Weight loss, along with the use of clothing, can bring individuals' perceived body size into closer congruence with their ideal body size. Leon (1976), Loftis (1981), and Cash (1993, 1994) found that successful weight loss was related to an increased body image. However, their studies did not examine specific areas of weight loss or satisfaction with areas

where weight loss had occurred. They also did not examine clothing behavior related to weight loss.

Kwon and Parham (1994) demonstrated that women tend to choose certain types of clothing to increase body satisfaction based on how “fat” or “slender” they “feel.” However, their focus was not on the actual physical size of the subject. Ogle (1999) and Charles and Kerr (1986) found that clothing behavior did change with weight loss. However, their studies did not examine clothing behavior that resulted from losing weight in a specific area . These studies also did not look at specific clothing items and styles.

While studies have examined clothing and body cathexis as they relate to weight, none of these studies examined the changes that take place in clothing behavior as a result of weight loss. For example, women in a weight loss program can change several clothing sizes prior to reaching their weight loss goal; as a result, choices related to clothing styles may also change during the weight loss process.

Research has demonstrated that clothing is an integral part of body image (Horn & Gurel, 1981; Kaiser, 1997) and can be used to change one’s body image (Schilder, 1950). Women who engage in dieting behaviors are frequently motivated by the desire to change their body image (Cash & Hicks, 1990) and often seek help from a commercial weight loss program where women usually constitute the majority of the membership. There have been studies that examined body image among women in a weight loss program as well as studies that examined body image and its relationship to clothing. However, there have been no studies that examined clothing behavior, appearance management, created appearance, and body image of women in a weight loss program. Because clothing is such an integral part of the self (Horn & Gurel, 1981; Kaiser, 1997), it was important to examine the influences and contributions of this variable to weight loss.

An adaptation of the Rudd and Lennon (1994) model and the Tatarka (1995) model were used to investigate the relationships between appearance management, created appearance, body cathexis, and clothing behavior. The research model proposed that an individual engaged in appearance management behaviors in order to make their appearance closer to the cultural ideal. Therefore, the time and effort involved in a weight loss program was used as a measure of an individual’s appearance management behavior. The created appearance was the change in appearance achieved through weight loss. An individual’s body cathexis, or degree of satisfaction with the body, was the evaluation of the appearance created through appearance management, in this case, weight loss. Current clothing behavior and clothing behavior prior to weight loss were also examined.

The instrument was developed after reviewing pertinent literature and conducting a focus group, and included 78 items related to body cathexis, appearance management, created appearance, clothing behavior, and demographic variables. Nine hypotheses were formulated to test the relationships between the variables. A large number of statistical tests were conducted to test the hypotheses, and it was expected that there would be some significant tests by chance alone.

Weight Watchers® meetings in Southwestern Virginia were used to obtain a representative sample for the study, and the sample size was 171 participants. Age of respondents varied from under 21 years old to over 60 years old, with the majority in the 21-59 year old range. The majority had family incomes between $30,000 and $70,000, and the majority listed their occupation as “professional.” The sample was well educated, with the majority indicating they were either in college or had a college degree. The majority was married, and almost all of the respondents were White/Caucasian.

The proposed research model hypothesized that the following variables would be related: appearance management and created appearance, created appearance and body cathexis, body cathexis and current clothing behavior, and created appearance and current clothing behavior. Statistical testing indicated limited support of the four research hypotheses associated with the research model.

Hypothesis 1. *Among the women enrolled in a commercial weight loss program, there will be a relationship between appearance management and created appearance.*

The questionnaire items that were used included those related to appearance management (items 17 and 21-25) and created appearance (items 18-19). Pearson correlation coefficient, Spearman’s rho, and t-tests were used to determine the relationship between the variables. It was hypothesized that there would be a positive relationship between the appearance management items and created appearance. The results of the statistical tests indicated that there was a positive relationship between length of time in the weight loss program and the percentage of weight loss. Those who had been in the program longer had a greater percentage of weight loss. The results of the other three tests indicated there was no relationship between percentage of weight loss and following the program, staying for meetings, or participation in other weight loss activities.

An examination of the frequency of responses indicated that most respondents stated they followed the weight loss program “Always” or “Most of the time”, stayed for meetings every week or three times a month, and participated in other weight loss activities. Even though the

relationship between percentage of weight loss and appearance management was not significant, respondents did indicate they engaged in appearance management behaviors.

Hypothesis 2. *Among the women enrolled in a commercial weight loss program, there will be a relationship between created appearance and body cathexis.*

The questionnaire items that were used included those related to created appearance (items 18-20) and body cathexis (items 1-16). Pearson correlation coefficient and Wilcoxon's rank sum test were used to determine the relationship between the variables. It was hypothesized there would be a positive relationship between created appearance and body cathexis. Results of the statistical testing indicated there was a positive relationship between the percentage of weight loss and the average body cathexis score. Respondents with a greater percentage of weight loss indicated a higher average body cathexis score; therefore, those who had lost a greater percentage of weight were more satisfied on average with their body. This finding corresponds to the findings of other studies that found that successful weight loss was positively related to an increased body image (Cash, 1993; Cash, 1994; Leon, 1976; Loftis, 1981).

Results did indicate a positive relationship between a noticeable loss in the arms and the body cathexis score for the arms. Respondents who indicated they had a noticeable loss in the arms were more satisfied with the arms than those who had not indicated a noticeable loss. This finding corresponds to the findings of other studies that found that successful weight loss was positively related to an increased body image (Cash, 1993; Cash, 1994; Leon, 1976; Loftis, 1981). While these studies examined the body cathexis of individuals who had lost weight, they did not investigate where weight losses had occurred and the corresponding body cathexis scores.

Results also indicated that there were no relationships between a noticeable loss in the face, hips, thighs, buttocks, legs, waist, stomach or abdomen, or bust or breasts and the body cathexis scores for those areas. An examination of the frequency of responses indicated that a large percentage of respondents (45.6%) stated they had a noticeable weight loss in the face, and that the next highest frequencies were for the stomach or abdomen (36.8%), waist (29.2%), hips (21.1%), and buttocks (19.3%). These last four areas are all related to the lower torso, and are areas that women tend to be more dissatisfied with (Cash & Henry, 1985; Charles & Kerr, 1986; McAllister & Caltabiano, 1994; Monteath & McCabe, 1997). Cash (1992) also found that even though people had lost weight, they still had a lowered body image.

Hypothesis 3. *Among the women enrolled in a commercial weight loss program, there will be a relationship between body cathexis and current clothing behavior.*

The questionnaire items that were used included those related to body cathexis (items 1-16) and current clothing behavior (26-48). Gamma was used to determine the relationship between the variables. The results of the statistical testing indicated there were no relationships between clothing behavior and body cathexis scores for facial features, complexion, bust or breasts, and overall appearance.

Respondents who were more satisfied with the hips stated they wore straight skirts with more frequency, but wore full skirts and tops that cover the buttocks or hips with less frequency. Results indicated that respondents who were less satisfied with the hips stated they wore fitted dresses with less frequency. Those less satisfied with the thighs wore fitted dresses with less frequency. Respondents who were more satisfied with the buttocks wore shirts, blouses, or sweaters that cover the buttocks and hips with less frequency, and those who were less satisfied with the buttocks wore shirts, blouses, or sweaters tucked in with less frequency. Those who were less satisfied with the legs wore long skirts with more frequency. Those who indicated lower satisfaction with the waist stated they wore a belt with pants and skirts with less frequency and wore shirts, blouses, or sweaters tucked in with less frequency. Greater satisfaction with the waist was also related to wearing pants and skirts with a full or partial elastic waist with less frequency. Those less satisfied with the waist wore shirts, blouses, or sweaters untucked with more frequency.

Respondents who were less satisfied with the stomach or abdomen stated they wore the following items with less frequency: fitted dresses; belts with pants and skirts; and tucked in shirts, blouses, or sweaters. Those who were less satisfied with the stomach or abdomen also indicated they wore the following items with more frequency: unfitted dresses; elastic waist pants and skirts; and shirts, blouses, or sweaters untucked.

Respondents who indicated lower satisfaction with the shoulders, arms, and muscle tone all stated they wore sleeveless shirts, blouses, or sweaters with less frequency. Those who were less satisfied with weight indicated they wore the following items with less frequency: tight fitting clothing, short skirts, and shirts, blouses, or sweaters that were close-fitting. Respondents with a lower satisfaction for weight also indicated they wore loose fitting clothing with more frequency and wore shirts, blouses, or sweaters that were loose-fitting with more frequency.

These findings correspond to the findings of Ogle (1999) and Kwon and Parham (1994) who found that women used clothing to enhance body parts with which they were more satisfied, but camouflage the areas with which they were less satisfied. However, these studies

did not focus on specific body parts and the clothing that related to the body part, but rather on more general clothing behaviors. The present study provides new information about how women may choose clothing styles based on their level of satisfaction with various areas of their bodies.

Hypothesis 4. *Among the women enrolled in a commercial weight loss program, there will be a relationship between created appearance and current clothing behavior.*

The questionnaire items that were used included those related to created appearance (item 20) and current clothing behavior (items 26-48). Wilcoxon's rank sum test was used to determine the relationship between the variables. The results of the statistical testing indicated there were no relationships between clothing behavior and a noticeable weight loss for the buttocks, legs, stomach or abdomen, bust or breasts, and arms.

Results indicated that respondents who indicated they had a noticeable weight loss in the face stated they wore bright colored clothing with more frequency than those who did not indicate a noticeable loss in the face. Those who indicated they had a noticeable weight loss in the hips and thighs stated they wore unfitted dresses with less frequency than those who did not indicate a noticeable loss in those areas. Respondents with a noticeable weight loss in the waist stated they wore pants and skirts with a full or partial elastic waist with less frequency and pants and skirts with a waistband with more frequency than those who did not indicate a noticeable loss in the waist.

These findings correspond to the findings of Ogle (1999) and Charles and Kerr (1986) who found that changes in clothing behavior did occur with weight loss. In their studies, women who had lost weight indicated they wore more fitted clothing, instead of wearing clothing to hide their bodies. However, their studies did not focus specifically on clothing behavior as a result of losing weight in a specific body area. Their studies were qualitative studies that were conducted using interviews and participants volunteered the information as part of an answer to a more general question. Findings from the present study offer insight into how women may choose clothing based on where they have experienced a weight loss.

Hypothesis 5. *Among the women enrolled in a commercial weight loss program, there will be a difference between their current clothing behavior and their clothing behavior prior to losing weight.*

The questionnaire items that were used included those related to current clothing behavior (items 26-48) and prior clothing behavior (items 49-71). Wilcoxon's signed ranks test

deals with paired data and was used to test the relationship between the variables (Schulman, 1992). Results of the statistical testing indicated no relationship between current clothing behavior and prior clothing behavior for loose fitting clothing, tight fitting clothing, long skirts, short sleeved and sleeveless shirts, blouses, or sweaters.

Respondents indicated they currently wore the following items with more frequency than they did prior to losing weight: bright colored clothing; flat front pants; fitted dresses; short skirts; straight skirts; pants and skirts with a waistband; a belt with pants and skirts; shirts, blouses, or sweaters tucked in; and close-fitting shirts, blouses, or sweaters. Respondents also indicated they currently wore the following items with less frequency than they did prior to losing weight: dark colored clothing; pleated front pants; unfitted dresses; full skirts; pants and skirts with a full or partial elastic waist; long sleeved shirts, blouses, or sweaters; shirts, blouses, or sweaters that were untucked; loose-fitting shirts, blouses, or sweaters; and shirts, blouses, or sweaters that covered the buttocks and hips.

These findings correspond to the findings of Ogle (1999) and Charles and Kerr (1986) who found that changes in clothing behavior did occur with weight loss. In their studies, women who had lost weight wore more fitted clothing, instead of wearing clothing to hide their bodies. However, their studies did not focus on specific clothing items or styles, but rather on more general clothing behavior. The present study offers insight into the types and styles of clothing that women choose as a result of losing weight.

Hypothesis 6. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and appearance management.*

The questionnaire items that were used included those related to demographics (items 72, 73, 75-77) and appearance management (items 17 and 21-25). One-way ANOVA, t-tests, gamma and chi-square were used to determine the relationship between the variables. It was hypothesized there would be a positive relationship between age and length of time in the weight loss program and income and length of time in the program, but no relationships between the rest of the demographic variables and length of time. Results of the statistical testing indicated that older respondents had been in the program longer, but did not indicate that those with a higher income had been in the program longer. Results also indicated that respondents' length of time in the weight loss program differed by education level, but not in a consistent manner. There were no relationships indicated between occupation and marital status and the length of time in the weight loss program. In the present study, length of time in the program was a measure of appearance management; therefore, these findings correspond

to the findings of Adame et al. (1990) who found that age and education were related to exercise involvement, which included time spent exercising (a measure of appearance management).

It was hypothesized there would be no relationships between any of the demographic variables and following the weight loss program, staying for the meetings, or participation in other activities. Results of the statistical testing indicated no relationship between demographics and staying for the meetings or other activities. Results indicated no relationship between income, education, occupation or marital status and following the program. Results showed no relationship between age and two parts of following the program (staying within the points range and drinking six glasses of water every day) but did indicate a positive relationship between age and eating fruits and vegetables. Respondents who were older stated they more often ate five fruits and vegetables every day than younger respondents.

No previous studies have examined demographic variables as they relate to the components of a weight loss program. This study provides information in particular about how older members of a weight loss program may differ from younger members.

Hypothesis 7. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and created appearance.*

The questionnaire items that were used included those related to demographics (items 72, 73, 75-77) and created appearance (items 18-20). Demographics that were used in statistical analysis included age, income, racial/ethnic group, occupation, education, and marital status. One-way ANOVA, t-tests, and chi-square were used to determine the relationship between the variables. It was hypothesized there would be no relationships between any of the demographic variables and created appearance. Results of the statistical testing indicated there were no relationships between percentage of weight loss and age, income, and occupations. Results showed that respondents who were more educated had a greater percentage of weight loss than other respondents. Married respondents also had a greater percentage of weight loss than those who were not married.

Results indicated no relationships between a noticeable weight loss in a body area and age, income, and marital status. Respondents who listed their occupation as student, secretary/clerical or professional stated they had a noticeable weight loss in the waist more than respondents who listed other occupations. Respondents with a bachelor's degree stated they had a noticeable weight loss in the thighs more than respondents with other levels of education.

Previous studies have not examined demographic variables as they relate to areas where weight loss has occurred. Given the findings of the current study, future research should further investigate the relationship between demographics and weight loss.

Hypothesis 8. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and body cathexis.*

The questionnaire items that were used included those related to demographics (items 72, 73, 75-77) and the average body cathexis score ([sum of items1-16] divided by 16). Demographics that were used in statistical analysis included age, income, racial/ethnic group, occupation, education, and marital status. Gamma and chi-square were used to determine the relationship between the variables. It was hypothesized there would be no relationships between any of the demographic variables and body cathexis. Results of the statistical testing indicated there were no relationships between demographics and the average body cathexis score. Demographics had no effect on the average body cathexis score of respondents. As previously noted, the majority (76.0%) of respondents had an average body cathexis score within the 2.0-2.9 range, indicating dissatisfaction.

Hypothesis 9. *Among the women enrolled in a commercial weight loss program, there will be a relationship between demographics and current clothing behavior.*

The questionnaire items that were used included those related to demographics (items 72, 73, 75-77) and current clothing behavior (items 26-48). Demographics that were used in statistical analysis included age, income, racial/ethnic group, occupation, education, and marital status. Gamma and chi-square were used to determine the relationship between the variables. For age, the direction of the hypothesized relationship was dependent on the clothing behavior. For example, it was hypothesized that older respondents would indicate they wore tight fitting clothing with less frequency and loose fitting clothing with more frequency than younger respondents. Results of the statistical testing indicated that older respondents wore the following clothing items with more frequency than younger respondents: pleated front pants; unfitted dresses; long skirts; full skirts; elastic waist pants and skirts; and shirts, blouses, or sweaters that were loose-fitting or covered the buttocks and hips.

Results indicated that younger respondents wore the following clothing items with more frequency than older respondents: tight fitting clothing; flat front pants; short skirts; pants and skirts with a waistband; a belt with pants and skirts; sleeveless shirts, blouses, or sweaters; and close-fitting shirts, blouses, or sweaters.

It was hypothesized there would be no relationship between the clothing behavior items and income, education, occupation, and marital status. Results indicated that respondents with a mid-range salary indicated they wore fitted dresses with less frequency and belts with pants and skirts with less frequency. Those with a higher income stated they wore pants and skirts with a waistband and straight skirts with more frequency than respondents in other income brackets. Respondents with higher education levels indicated they wore long sleeved tops with more frequency than respondents with lower levels of educations.

Results indicated that respondents who indicated their occupation as secretary/clerical or professional stated they wore long sleeved tops with more frequency, elastic waist pants and skirts with more frequency, and sleeveless tops with more frequency than respondents with other occupations. Students indicated they did not wear elastic waist pants and skirts, but did wear long sleeved and sleeveless tops with more frequency than respondents with other occupations.

Those who were married indicated they wore the following clothing items with more frequency than those who were not married: pleated front pants; unfitted dresses; long skirts; and long sleeved shirts, blouses, or sweaters. Married respondents also indicated they wore the following items with less frequency than unmarried respondents: tight fitting clothing, flat front pants; fitted dresses; short skirts; elastic waist pants and skirts; and sleeveless shirts, blouses, or sweaters.

These findings correspond to previous studies (Dardis et al., 1981; Norum, 1989) that found a relationship between clothing expenditures and demographic variables of age, marital status and education. However, these studies did not examine demographic variables related to specific clothing items or styles. The findings from the present study provide information in particular about how women that differ in age or marital status can differ in their clothing choices. In the present study, current clothing behavior seems to be influenced by the age and marital status of the respondent. Future studies could further investigate the relationship between demographic variables and clothing behavior.

Conclusions

Previous research indicated that successful weight loss was positively related to an increased body image (Cash, 1993; Cash, 1994; Leon, 1976; Loftis, 1981). Results from the present study indicated that a greater percentage of weight loss was related to a higher average body cathexis score. Except for one body area, the arms, a noticeable weight loss in an area was not related to a higher body cathexis score for the area. Even though women in the sample

indicated they had lost weight in areas of the lower torso, they also tended to be dissatisfied with the lower torso. Many respondents made comments such as “Very!” or placed exclamation points next to an area for which they had indicated dissatisfaction. Cash (1992) investigated “phantom body size,” in which individuals retain a lowered body image even after losing a significant amount of weight. More than 50% of the respondents in this study had lost over 25% of their weight loss goal.

Results from this study demonstrated that women who were more satisfied with certain body parts or features wore certain clothing items. For example, respondents who were more satisfied with the hips indicated they wore straight skirts with more frequency than those who were less satisfied. Results also demonstrated that women who were less satisfied with certain body parts or features wore certain clothing items. For example, respondents who were less satisfied with the waist wore belts with pants and skirts with less frequency and wore tops that were tucked in with less frequency than those who were more satisfied.

Results from this study also indicated that respondents’ clothing behavior changed once they had lost weight in that area. For example, if they had a noticeable loss in the hips or thighs, they wore unfitted dresses with less frequency than those who did not have a noticeable loss. An examination of the frequency of responses indicated that many respondents stated they had a noticeable weight loss in the stomach or abdomen, waist, hips, and buttocks, even though there were not many significant test results for these areas.

While results of this study did not find many significant test results between having a noticeable weight loss in an area and wearing clothing that emphasized that area, or between greater satisfaction with an area and wearing clothing that emphasized that area, findings did demonstrate that respondents’ current clothing behavior differed from clothing behavior prior to losing weight. For example, these respondents indicated they currently wore items such as fitted dresses, straight skirts, and tops that were tucked in with more frequency than they did prior to losing weight.

A limitation of the present study that should be noted is that providing the choice of “Sometimes” for an answer allowed respondents the ability to not indicate a strong preference either way for clothing behavior items. A large majority of respondents chose “Sometimes” for many of the clothing behavior items. A recommendation for future studies is to use a larger sample size in order to ensure that more responses will be at either extreme of the scale, which may diminish the influence of the choice of “Sometimes” in the statistical analysis.

Implications

Findings from this study regarding the relationships among appearance management, body cathexis, and clothing behavior of women in weight loss programs will contribute to the base knowledge concerning women and their body image and clothing behavior. Weight loss programs can also use this information as a tool to assist their members during the weight loss process. Previous research has demonstrated that clothing influences body image; therefore, it may be used as a tool to improve the body image of the overweight individual as she makes the transition to smaller clothing sizes.

Previous research had examined body image as it was related to weight loss, but did not examine clothing in relation to these two variables. Previous research had also examined clothing behavior related to body image, but did not look at these variables in relation to weight loss. The research model used in this study incorporated these variables by examining the relationships between appearance management, created appearance, body cathexis, and clothing behavior. This study provided new information on clothing behavior related to body cathexis and weight loss. Even though there were not a large number of significant tests, results indicated there were relationships among the variables. Because there could have been some co-variance related to demographics, future studies should control for demographic variables to eliminate their influence on body cathexis, weight loss, and clothing behavior.

While previous studies have examined body image and clothing, they did not investigate the body cathexis for specific areas of the body and its relationship to clothing behavior. Findings from the present study provide new information about how women choose clothing based on the satisfaction with their bodies. Most respondents in the study avoided wearing clothing that would emphasize parts of the body with which they were dissatisfied. For example, those who were less satisfied with the hips and thighs stated they wore fitted dresses less. Fitted dresses are designed to fit closer to the body and would reveal the shape of the body; therefore, this style of dress would emphasize the hip or thigh area. Some respondents indicated they wore clothing that would emphasize areas with which they were satisfied. For example, those who were more satisfied with the hips stated they wore straight skirts more. By fitting closely to the body, the straight skirt would emphasize the shape of the hips.

It should be noted that the majority of respondents did indicate dissatisfaction with their bodies. Information that demonstrates how different clothing styles can be used to accentuate the body, and not just cover up areas of dissatisfaction, could help improve the body satisfaction of women as they are progressing in their weight loss. For example, findings from this study showed that these women were dissatisfied with areas such as the waist and stomach, even

though they indicated they had a noticeable loss in those areas. Clothing behaviors that accentuate these areas, instead of covering them up, would emphasize the weight loss that has occurred in those areas. These include behaviors such as wearing tops that were tucked in instead of untucked, or wearing belts would make the stomach and waist areas more visible. A visibly smaller waist or stomach could improve body satisfaction.

Findings from the present study also offer insight into how women choose clothing based on where they have experienced a weight loss, and also provides information about the types and styles of clothing that women choose as a result of losing weight. Previous studies have found that clothing behavior does change as a result of weight loss, but these studies did not investigate specific clothing changes related to weight loss or related to areas of the body where a loss had occurred. Results from this study indicated that clothing behavior did change after weight loss. For example, women in this study stated they wore full skirts more before weight loss, but wore straight skirts more after weight loss. Respondents also wore flat front pants more after weight loss, and pleated front pants more before weight loss.

While these women did change their clothing behavior as a result of losing weight, they still indicated that they were dissatisfied with their bodies. Women in this study indicated that they had lost weight in their hips, stomach or abdomen, waist, and buttocks; however, these were all areas for which they currently indicated high dissatisfaction. Information on how clothing can be used to accentuate and enhance body parts or features, especially the areas where weight loss has occurred, could help enhance their body image and self-esteem.

If women are able to increase their body image as they are going through the weight loss program, they may feel better about themselves, and be more likely to stick with the weight loss program and be more successful in their weight loss. Weight loss programs could use the information garnered from this research as an educational tool that could enhance the potential success of women enrolled in commercial weight loss programs. Women who are enrolled in weight loss programs can be provided with information about how to use clothing to enhance their appearance and improve their body image. Instead of using a specific weight loss goal as the only measure of their success, women can use clothing to emphasize the areas where they have lost weight, allowing themselves to see the result of their weight loss efforts. By increasing their body satisfaction and feeling better about their bodies as they are going through the weight loss program, they may be more likely to continue with their weight loss efforts and be more successful in their weight loss journey.

Recommendations for Future Research

1. Conduct a similar study using a different weight loss program and compare the results of the two studies.
2. Conduct a study employing male and female subjects and compare the results by gender.
3. Conduct a similar study using subjects who are dieting to lose weight but are not enrolled in a commercial weight loss program and compare the results of the two studies.
4. Conduct a similar study in another region of the United States and compare the results of the two studies.
5. Conduct a longitudinal study using subjects enrolled in a commercial weight loss program in order to obtain more accurate results of clothing behavior before and after weight loss.
6. Conduct a study that examines the relationship between demographics and weight loss.
7. Conduct a study that examines the relationship between demographics and clothing behavior.

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APPENDIX A

TO ALL CURRENT AND LIFETIME WEIGHT WATCHERS® MEMBERS:

You are invited to participate in a study on women's clothing behavior and body image. The purpose of this study is to investigate the clothing behavior and body image of women who are enrolled in commercial weight loss programs.

Please take a few minutes to complete this questionnaire. There are no right or wrong answers. All of your answers will be confidential.

This research is needed to help fulfill the requirements for my doctoral degree in Clothing and Textiles at Virginia Tech. Thank you for your time and cooperation!

Tammy R. Robinson
Graduate Student
Virginia Tech

✦✦

If you would like to be entered into a drawing for a "door prize," please complete the information below. Please turn this form in separately from your questionnaire. This information will not be attached to your questionnaire and will not be used to identify your answers. There are several prizes available, and they will be distributed at a later meeting.

Yes, please enter me into a drawing for a "door prize."

Name: ______________________________________

Meeting you normally attend:______ Monday 12:30

______ Monday 5:30

______ Tuesday 5:30

______ Tuesday 6:30 (Radford)

______ Wednesday 6:00

______ Wednesday 6:00 (Floyd)

______ Thursday 4:30

______ Thursday 6:00

______ Saturday 9:00

QUESTIONNAIRE

SECTION A: For the following items, please rate how satisfied or dissatisfied you **currently** are with your body for each of the following body parts or features. Please circle the number that corresponds to your answer choice.

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
1. Facial features	4	3	2	1
2. Complexion	4	3	2	1
3. Hair	4	3	2	1
4. Hips	4	3	2	1
5. Thighs	4	3	2	1
6. Buttocks	4	3	2	1
7. Legs	4	3	2	1
8. Waist	4	3	2	1
9. Stomach or abdomen	4	3	2	1
10. Bust or breasts	4	3	2	1
11. Shoulders	4	3	2	1
12. Arms	4	3	2	1
13. Muscle tone	4	3	2	1
14. Weight	4	3	2	1
15. Height	4	3	2	1
16. Overall appearance	4	3	2	1

SECTION B: For the following items, please fill in the blanks.

17. How long have you been a member of Weight Watchers®?

    _____years, _____months, and/or_____weeks

18. According to your height and age, what is a realistic number of pounds for you to lose?
    (what is your Weight Watchers® weight loss goal) **_____pounds**

19. How much weight have you lost since you joined Weight Watchers®? **_____pounds**

SECTION B (continued): For the following items, please circle the appropriate answer.

20. Visually, where has your weight loss been more **noticeable**? You may choose **up to three** areas.
    a. Face
    b. Hips
    c. Thighs
    d. Buttocks
    e. Legs
    f. Waist
    g. Stomach or abdomen
    h. Bust or breasts
    i. Arms
    j. No weight loss
    k. No noticeable weight loss

21. How often do you follow the Weight Watchers® plan by staying within your points range?
    a. Always
    b. Most of the time
    c. Sometimes
    d. Rarely
    e. Never

22. How often do you follow the Weight Watchers® plan by drinking 6 glasses of water every day?
    a. Always
    b. Most of the time
    c. Sometimes
    d. Rarely
    e. Never

23. How often do you follow the Weight Watchers® plan by eating 5 fruits & vegetables every day?
    a. Always
    b. Most of the time
    c. Sometimes
    d. Rarely
    e. Never

24. How often do you stay for the meeting?
    a. Every week
    b. Three times a month
    c. Twice a month
    d. Once a month
    e. Never, just weigh and leave

25. Do you participate in other weight reduction activities (for example, aerobic exercise, walking, or weight-lifting) outside of Weight Watchers®?
    a. Yes (Specify)_____
    b. No

SECTION C: The following items ask about your **current** clothing practices. Please circle the number that corresponds to how frequently you wear the following items.

Currently …	Always	Most of the time	Sometimes	Rarely	Never
26. The clothes I wear are loose fitting	5	4	3	2	1
27. The clothes I wear are tight fitting	5	4	3	2	1
28. The clothes I wear are dark colored	5	4	3	2	1
29. The clothes I wear are bright colored	5	4	3	2	1
30. When I wear pants, they are flat front pants (without pleats)	5	4	3	2	1
31. When I wear pants, they are pleated front pants	5	4	3	2	1
32. When I wear dresses, they are unfitted dresses (for example, an A-line dress, jumper, or other loose-fitting dress)	5	4	3	2	1
33. When I wear dresses, they are fitted dresses (for example, a close-fitting dress that follows the curves of the body without being tight)	5	4	3	2	1
34. When I wear skirts, they are above knee length	5	4	3	2	1
35. When I wear skirts, they are below knee length	5	4	3	2	1
36. When I wear skirts, they are straight skirts	5	4	3	2	1
37. When I wear skirts, they are full skirts (for example, A-line or gathered)	5	4	3	2	1
38. When I wear pants and skirts, they have a full or partial elastic waist	5	4	3	2	1
39. When I wear pants and skirts, they have a waistband (with a zipper and a button or snap)	5	4	3	2	1
40. When I wear pants and skirts, I wear a belt with them	5	4	3	2	1
41. When I wear shirts, blouses, or sweaters, they are long sleeved	5	4	3	2	1
42. When I wear shirts, blouses, or sweaters, they are short sleeved	5	4	3	2	1
43. When I wear shirts, blouses, or sweaters, they are sleeveless	5	4	3	2	1
44. When I wear shirts, blouses, or sweaters, I wear them tucked in	5	4	3	2	1
45. When I wear shirts, blouses, or sweaters, I wear them untucked	5	4	3	2	1
46. When I wear shirts, blouses, or sweaters, they are close-fitting	5	4	3	2	1
47. When I wear shirts, blouses, or sweaters, they are loose-fitting	5	4	3	2	1
48. When I wear shirts, blouses, or sweaters, they cover my buttocks and hips	5	4	3	2	1

If you have lost weight, please complete items 49-71 in the following section. If you have not lost weight, please skip to the next page and begin with item 72.

SECTION D: The following items ask about your clothing practices before you lost weight. Please circle the number that corresponds to how frequently you wore the following items before you joined Weight Watchers® and lost weight.

Before I lost weight…	**Always**	**Most of the time**	**Sometimes**	**Rarely**	**Never**
49. The clothes I wore were loose fitting	5	4	3	2	1
50. The clothes I wore were tight fitting	5	4	3	2	1
51. The clothes I wore were dark colored	5	4	3	2	1
52. The clothes I wore were bright colored	5	4	3	2	1
53. When I wore pants, they were flat front pants (without pleats)	5	4	3	2	1
54. When I wore pants, they were pleated front pants	5	4	3	2	1
55. When I wore dresses, they were unfitted dresses (for example, an A-line dress, jumper, or other loose-fitting dress)	5	4	3	2	1
56. When I wore dresses, they were fitted dresses (for example, a close-fitting dress that follows the curves of the body without being tight)	5	4	3	2	1
57. When I wore skirts, they were above knee length	5	4	3	2	1
58. When I wore skirts, they were below knee length	5	4	3	2	1
59. When I wore skirts, they were straight skirts	5	4	3	2	1
60. When I wore skirts, they were full skirts (for example, A-line or gathered)	5	4	3	2	1
61. When I wore pants and skirts, they had a full or partial elastic waist	5	4	3	2	1
62. When I wore pants and skirts, they had a waistband (with a zipper and a button or snap)	5	4	3	2	1
63. When I wore pants and skirts, I wore a belt with them	5	4	3	2	1
64. When I wore shirts, blouses, or sweaters, they were long sleeved	5	4	3	2	1
65. When I wore shirts, blouses, or sweaters, they were short sleeved	5	4	3	2	1
66. When I wore shirts, blouses, or sweaters, they were sleeveless	5	4	3	2	1
67. When I wore shirts, blouses, or sweaters, I wore them tucked in	5	4	3	2	1
68. When I wore shirts, blouses, or sweaters, I wore them untucked	5	4	3	2	1
69. When I wore shirts, blouses, or sweaters, they were close-fitting	5	4	3	2	1
70. When I wore shirts, blouses, or sweaters, they were loose-fitting	5	4	3	2	1
71. When I wore shirts, blouses, or sweaters, they covered my buttocks and hips	5	4	3	2	1

SECTION E: For the following items, please circle the appropriate answer.

72. What is your age?
    a. Under 21
    b. 21-29
    c. 30-39
    d. 40-49
    e. 50-59
    f. 60 or over

73. What is your approximate total annual family income?
    a. $10,000 or below
    b. $10,001 to $30,000
    c. $30,001 to $50,000
    d. $50,001 to $70,000
    e. $70,001 to $90,000
    f. $90,001 or more

74. What is your racial/ethnic group?
    a. White/Caucasian
    b. Black/African-American/African
    c. Latino/Hispanic/Hispanic-American
    d. Asian/Asian-American
    e. Native American/American Indian
    f. Other (Specify)_____

75. What is your occupation?
    a. Student
    b. Managerial
    c. Technician
    d. Secretary/clerical
    e. Professional (i.e., teacher, lawyer, doctor)
    f. Not employed at this time
    g. Other (Specify)_____

76. What is the highest level of education that you have completed?
    a. High school
    b. Some college
    c. Associate's degree
    d. Bachelor's degree
    e. Graduate degree
    f. Other (Specify)_____

77. What is your marital status?
    a. Married
    b. Not married

78. What is your gender?
    a. Female
    b. Male

Please add any additional comments you feel would be useful:_____

_____

_____

THANK YOU FOR YOUR TIME!!

APPENDIX B

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY

Institutional Review Board

Dr. David M. Moore
IRB (Human Subjects) Chair
Assistant Vice Provost for Research Compliance
CVM Phase II - Duckpond Dr., Blacksburg, VA 24061-0442
Office: 540/231-4991; FAX: 540/231-6033
e-mail: moored@vt.edu

February 14, 2003

MEMORANDUM

TO: Tammy R. Robinson 0426
Valerie Giddings 0426

FROM: David M. Moore

SUBJECT: IRB EXEMPTION APPROVAL – "Clothing Behavior, Body Cathexis, and Appearance Management of Women Enrolled in a Commercial Weight Loss Program" – IRB # 03-076

I have reviewed your request to the IRB for exemption for the above referenced project. I concur that the research falls within the exempt status. Approval is granted effective as of February 12, 2003.

cc: file

APPENDIX C

List of other occupations

Occupation	Frequency	Percentage of Sample (n=171)
Technician	2	1.2%
Factory worker	2	1.2%
School bus driver	2	1.2%
Electronics assembler	2	1.2%
Artist – self-employed	1	0.6%
Application support for software company	1	0.6%
Did not specify	2	1.2%
Total	12	7.1%

APPENDIX D

Comments from Survey Participants

I think your survey was too long to get a good response.

I haven't lost enough weight to change my dressing habits.

Kept weight off 2 years – Husband don't come but has lost 20 pounds with me.

Love WW

Weight Watchers really works.

I have health problems and the doctor said it would be very hard for me to lose weight. My doctor is very well pleased with my results so far with Weight Watchers. Just stick with it.

It's been fun so far.

As far as clothing goes, there are no affordable clothes that flatter larger women.

Gaining weight sucks.

My overweight times I have either been pregnant or breastfeeding.

I have square hips and flat rear-end, slim legs, too much tummy, pretty face. I would love to find pants that would tuck in abdomen and hips even when I'm trim because I still have a little tummy and those square hips. I often take my hands and push my hips in when looking in the mirror – it gives me the hour-glass shape. This is why I wish for the pants with the support. And oh how I miss all the pretty feminine colors! Soft yellows, fuchsia, turquoise, purple, pink, floral blouses.

Journaling how many pts. I eat each day is a HUGE part of the plan, otherwise you cheat yourself!

I have always been overweight from early childhood. I was told it was a "sin" not to eat everything on my plate!!

Good program. I need discipline of weigh-ins and meetings – We have excellent leader.

I wear what I am in the mood for.

Good questions to think about yourself.

Just started, no change in clothing habits yet.

I lost 60 pounds about 3 years ago with Weight Watchers and my answers would not change from above.

This really shows why I haven't lost weight! It has however kept me from blowing-up. I've learned healthier eating habits and portions.

APPENDIX E

Frequency with which respondents indicated they followed the Weight Watchers® program

Program Item	Always		Most of the Time		Sometimes		Rarely		Never		No Response		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Points	38	22.2%	**107**	**62.6%**	20	11.7%	3	1.8%	1	0.6%	2	1.2%	171	100.0%
Water	**68**	**39.8%**	54	31.6%	32	18.7%	14	8.2%	2	1.2%	1	0.6%	171	100.0%
Fruit/Veg	30	17.5%	**76**	**44.4%**	49	28.7%	14	8.2%	1	0.6%	1	0.6%	171	100.0%
Meeting	**96**	**56.1%**	34	19.9%	15	8.8%	13	7.6%	12	7.0%	1	0.6%	171	100.0%

Program Item	Every week		Three times / week		Twice a month		Once a month		Never		No Response		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Meeting	**96**	**56.1%**	34	19.9%	15	8.8%	13	7.6%	12	7.0%	1	0.6%	171	100.0%

Notes: Totals may not add up to 100.0% due to rounding.
Bold indicates majority response.

APPENDIX F

Other weight reduction activities respondents participated in outside of Weight Watchers®

Activity	**Frequency**	**Percentage of Sample (n=171)**
Walking	**91**	**53.2%**
Weight Lifting	29	17.0%
Cardio/aerobic exercise machine (treadmill, elliptical trainer, stationary bike	19	11.1%
Aerobics/exercise class (step aerobics, jazzercise, toning/conditioning class	17	9.9%
Running	13	7.6%
Go to gym/fitness center (no specific activity given)	7	4.1%
Bike riding	7	4.1%
Pilates	4	2.3%
Swimming	3	1.8%
Water aerobics	3	1.8%
Exercise video at home	3	1.8%
Yoga	2	1.2%
Taebo	2	1.2%
Exercise (no specific activity given)	2	1.2%
Yard work	1	0.6%
Skiing	1	0.6%
Working out	1	0.6%
Cardiac rehab program	1	0.6%
Floor exercises	1	0.6%
Playing chase with children	1	0.6%
Common Health (fitness program for faculty and staff at Virginia Tech)	1	0.6%

Notes: Total will not add up to 100.0%; respondents were allowed to choose up to three responses.
Bold indicates majority response.

APPENDIX G

Amount of weight respondents indicated would be a realistic number of pounds to lose according to height and age (their weight loss goal)

Weight loss goal	Frequency	Percentage
1-25 pounds	45	26.3%
26-50 pounds	**59**	**34.5%**
51-75 pounds	26	15.2%
76-100 pounds	16	9.4%
101-125 pounds	5	2.9%
126-150 pounds	14	8.2%
151-175 pounds	3	1.8%
175-200 pounds	2	1.2%
Over 200 pounds	1	0.6%
Total	171	100.0%

Notes: Totals may not add up to 100.0% due to rounding.
Bold indicates majority response.

Amount of weight respondents had lost since joining Weight Watchers®

Amount of weight lost	Frequency	Percentage
0 pounds	4	2.3%
1-25 pounds	**133**	**77.8%**
26-50 pounds	26	15.2%
51-75 pounds	5	2.9%
76-100 pounds	1	0.6%
Over 100 pounds	2	1.2%
Total	171	100.0%

Notes: Totals may not add up to 100.0% due to rounding.
Bold indicates majority response.

APPENDIX H

Frequency with which respondents indicated the degree of satisfaction with body parts or features

Body Cathexis Item	VS		S		D		VD		NR		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Facial features	16	9.4%	**135**	**78.9%**	17	9.9%	3	1.8%	0	0.0%	171	100.0%
Complexion	29	17.0%	**97**	**56.7%**	38	22.2%	7	4.1%	0	0.0%	171	100.0%
Hair	42	24.6%	**108**	**63.2%**	18	10.5%	3	1.8%	0	0.0%	171	100.0%
Hips	4	2.3%	42	24.6%	**84**	**49.1%**	41	24.0%	0	0.0%	171	100.0%
Thighs	3	1.8%	24	14.0%	**99**	**57.9%**	45	26.3%	0	0.0%	171	100.0%
Buttocks	4	2.3%	39	22.8%	**84**	**49.1%**	44	25.7%	0	0.0%	171	100.0%
Legs	7	4.1%	43	25.1%	**93**	**54.4%**	27	15.8%	1	0.6%	171	100.0%
Waist	3	1.8%	34	19.9%	**85**	**49.7%**	47	27.5%	2	1.2%	171	100.0%
Stomach or abdomen	4	2.3%	12	7.0%	**84**	**49.1%**	69	40.4%	2	1.2%	171	100.0%
Bust or breasts	13	7.6%	**91**	**53.2%**	56	32.7%	10	5.8%	1	0.6%	171	100.0%
Shoulders	11	6.4%	**111**	**64.9%**	42	24.6%	6	3.5%	1	0.6%	171	100.0%
Arms	8	4.7%	62	36.3%	**87**	**50.9**	12	7.0	2	1.2	171	100.0
Muscle tone	5	2.9%	36	21.1%	**100**	**58.5**	28	16.4	2	1.2	171	100.0
Weight	2	1.2%	26	15.2%	**87**	**50.9**	54	31.6	2	1.2	171	100.0
Height	24	19.9%	**118**	**69.0%**	15	8.8	3	1.8	1	0.6	171	100.0
Overall appearance	3	1.8%	76	44.4%	**83**	**48.5**	8	4.7	1	0.6	171	100.0

Notes: VS=very satisfied, S=Satisfied, D=Dissatisfied, VD=Very dissatisfied
Percentages may not add up to 100.0% due to rounding.
Bold indicates majority response.

APPENDIX I

Frequency with which respondents indicated they currently participated in certain clothing behaviors

Current Clothing Behavior Items	Always		Most of the Time		Sometimes		Rarely		Never		No Response		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
#26 Loose fitting clothing	21	12.3%	63	36.8%	**67**	**39.2%**	18	10.5%	1	0.6%	1	0.6%	171	100.0%
#27 Tight fitting clothing	3	1.8%	15	8.8%	57	33.3%	**64**	**37.4%**	31	18.1%	1	0.6%	171	100.0%
#28 Dark colored clothing	9	5.3%	63	36.8%	**86**	**50.3%**	11	6.4%	0	0.0%	2	1.2%	171	100.0%
#29 Bright colored clothing	2	1.2%	28	16.4%	**101**	**59.1%**	38	22.2%	2	1.2%	0	0.0%	171	100.0%
#30 Flat front pants	**62**	**36.3%**	55	32.2%	32	18.7%	12	7.0%	6	3.5%	4	2.3%	171	100.0%
#31 Pleated front pants	4	2.3%	15	8.8%	30	17.5%	52	30.4%	**65**	**38.0%**	5	2.9%	171	100.0%
#32 Unfitted dresses	15	8.8%	54	31.6%	**56**	**32.7%**	28	16.4%	16	9.4%	2	1.2%	171	100.0%
#33 Fitted dresses	5	2.9%	31	18.1%	**56**	**32.7%**	46	26.9%	31	18.1%	2	1.2%	171	100.0%
#34 Skirts above knee length	5	2.9%	17	9.9%	41	24.0%	**59**	**34.5%**	47	27.5%	2	1.2%	171	100.0%
#35 Skirts below knee length	37	21.6%	**67**	**39.2%**	37	21.6%	17	9.9%	11	6.4%	2	1.2%	171	100.0%
#36 Straight skirts	12	7.0%	52	30.4%	**66**	**38.6%**	30	17.5%	10	5.8%	1	0.6%	171	100.0%
#37 Full skirts	7	4.1%	31	18.1%	**57**	**33.3%**	38	22.2%	35	20.5%	3	1.8%	171	100.0%
#38 Elastic waist	9	5.3%	27	15.8%	**57**	**33.3%**	43	25.1%	35	20.5%	0	0.0%	171	100.0%
#39 Waistband	33	19.3%	**63**	**36.8%**	44	25.7%	19	11.1%	11	6.4%	1	0.6%	171	100.0%
#40 Belt	8	4.7%	26	15.2%	43	25.1%	**49**	**28.7%**	44	25.7%	1	0.6%	171	100.0%
#41 Long sleeved tops	1	0.6%	30	17.5%	**122**	**71.3%**	14	8.2%	3	1.8%	1	0.6%	171	100.0%
#42 Short sleeved tops	1	0.6%	21	12.3%	**133**	**77.8%**	16	9.4%	0	0.0%	0	0.0%	171	100.0%
#43 Sleeveless tops	1	0.6%	2	1.2%	**65**	**38.0%**	63	36.8%	40	23.4%	0	0.0%	171	100.0%
#44 Tucked in tops	3	1.8%	21	12.3%	**54**	**31.6%**	48	28.1%	44	25.7%	1	0.6%	171	100.0%
#45 Untucked tops	44	25.7%	52	30.4%	**60**	**35.1%**	11	6.4%	2	1.2%	2	1.2%	171	100.0%

Current Clothing Behavior Items	Always		Most of the Time		Sometimes		Rarely		Never		No Response		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
#46 Close-fitting tops	1	0.6%	23	13.5%	**76**	**44.4%**	57	33.3%	12	7.0%	2	1.2%	171	100.0%
#47 Loose-fitting tops	13	7.6%	56	32.7%	**86**	**50.3%**	14	8.2%	0	0.0%	2	1.2%	171	100.0%
#48 Lower torso coverage	8	4.7%	33	19.3%	**61**	**35.7%**	48	28.1%	18	10.5%	3	1.8%	171	100.0%

Notes: Percentages may not add up to 100.0% due to rounding.
Bold indicates majority response.

APPENDIX J

Frequency with which respondents indicated they participated in certain clothing behaviors before losing weight

Prior Clothing behavior	Always		Most of the Time		Sometimes		Rarely		Never		No Response		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
#49 Loose fitting clothing	25	14.6%	**60**	**35.1%**	28	16.4%	19	11.1%	3	1.8%	36	21.1%	171	100.0%
#50 Tight fitting clothing	4	2.3%	21	12.3%	31	18.1%	**47**	**27.5%**	30	17.5%	38	22.2%	171	100.0%
#51 Dark colored clothing	13	7.6%	**58**	**33.9%**	56	32.7%	6	3.5%	1	0.6%	37	21.6%	171	100.0%
#52 Bright colored clothing	0	0.0%	19	11.1%	**69**	**40.4%**	38	22.2%	9	5.3%	36	21.1%	171	100.0%
#53 Flat front pants	32	18.7%	**36**	**21.1%**	31	18.1%	23	13.5%	8	4.7%	41	24.0%	171	100.0%
#54 Pleated front pants	5	2.9%	20	11.7%	36	21.1%	29	17.0%	**43**	**25.1%**	38	22.2%	171	100.0%
#55 Unfitted dresses	21	12.3%	**52**	**30.4%**	37	21.6%	13	7.6%	10	5.8%	38	22.2%	171	100.0%
#56 Fitted dresses	3	1.8%	12	7.0%	43	25.1%	**47**	**27.5%**	27	15.8%	39	22.8%	171	100.0%
#57 Skirts above knee length	5	2.9%	11	6.4%	25	14.6%	**46**	**26.9%**	**46**	**26.9%**	38	22.2%	171	100.0%
#58 Skirts below knee length	31	18.1%	**52**	**30.4%**	34	19.9%	7	4.1%	9	5.3%	38	22.2%	171	100.0%
#59 Straight skirts	2	1.2%	33	19.3%	**51**	**29.8%**	28	16.4%	16	9.4%	41	24.0%	171	100.0%
#60 Full skirts	6	3.5%	36	21.1%	**45**	**26.3%**	24	14.0%	21	12.3%	39	22.8%	171	100.0%
#61 Elastic waist	13	7.6%	37	21.6%	**43**	**25.1%**	20	11.7%	20	11.7%	38	22.2%	171	100.0%
#62 Waistband	19	11.1%	35	20.5%	**45**	**26.3%**	24	14.0%	10	5.8%	38	22.2%	171	100.0%
#63 Belt	3	1.8%	17	9.9%	30	17.5%	41	24.0%	**42**	**24.6%**	38	22.2%	171	100.0%
#64 Long sleeved tops	4	2.3%	26	15.2%	**93**	**54.4%**	9	5.3%	0	0.0%	39	22.8%	171	100.0%
#65 Short sleeved tops	0	0.0%	19	11.1%	**105**	**61.4%**	7	4.1%	2	1.2%	38	22.2%	171	100.0%
#66 Sleeveless tops	0	0.0%	3	1.8%	**50**	**29.2%**	42	24.6%	38	22.2%	38	22.2%	171	100.0%
#67 Tucked in tops	2	1.2%	9	5.3%	37	21.6%	41	24.0%	**44**	**25.7%**	38	22.2%	171	100.0%
#68 Untucked tops	35	20.5%	52	30.4%	**39**	**22.8%**	5	2.9%	2	1.2%	38	22.2%	171	100.0%

Prior Clothing behavior	Always		Most of the Time		Sometimes		Rarely		Never		No Response		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
#69 Close-fitting tops	1	0.6%	13	7.6%	**48**	**28.1%**	**48**	**28.1%**	21	12.3%	40	23.4%	171	100.0%
#70 Loose-fitting tops	18	10.5%	**55**	**32.2%**	52	30.4%	8	4.7%	0	0.0%	38	22.2%	171	100.0%
#71 Lower torso coverage	14	8.2%	40	23.4%	**46**	**26.9%**	26	15.2%	7	4.1%	38	22.2%	171	100.0%

Notes: Percentages may not add up to 100.0% due to rounding.
Bold indicates majority response.

VITA

Tammy Renee' Robinson attended Berry College in Rome, GA, where she graduated in 1989 with a B.S. degree in Fashion Merchandising. She attended Virginia Tech from 1991-1993 and received a M.S. degree in Clothing and Textiles. She returned to Virginia Tech in 1998 to pursue her Ph.D. in Clothing and Textiles.

She was employed as a retail assistant manager by The Ormond Shops from January 1990 – August 1991 and October 1993 – April 1994. She worked as a County Extension Agent for the University of Georgia Extension Service from April 1994 – May 1996. She was manager of Warren's Kiddie Shop from October 1996 – July 1998.

During her latest tenure at Virginia Tech, she has worked as a graduate teaching assistant in the Department of Near Environments, an adjunct instructor at Radford University, a ticket office assistant at the UUSA Ticket Office, and a receptionist and weigher for Weight Watchers®.

Upon completion of her degree, she will be employed as an Assistant Professor in Fashion Design and Retailing at Framingham State College in Framingham, MA.