

**RELATIONSHIPS BETWEEN BODY-CATHEXIS, CLOTHING BENEFITS
SOUGHT, AND CLOTHING BEHAVIOR; AND EFFECTS OF IMPORTANCE
OF MEETING THE IDEAL BODY IMAGE AND CLOTHING ATTITUDE**

by

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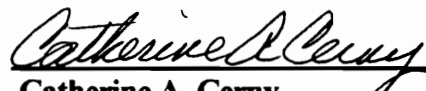
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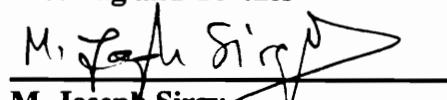
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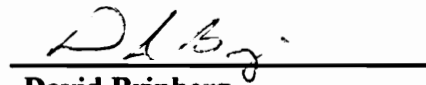
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(ABSTRACT)

Today, dissatisfaction with body image appears to be widespread. Few theoretical explanations have existed on why clothing can compensate for body dissatisfaction and on what clothing benefits are sought in relation to body satisfaction. Very limited studies exist on the relationships between satisfaction with different body areas and clothing behavior. The purpose of this study was to determine, for female college students, 1) the effects of body satisfaction on clothing benefits sought, clothing attitude, and clothing behavior and 2) the effects of importance of meeting the ideal body image on clothing benefits sought, clothing attitude, and clothing behavior.

The sample included 177 female college students, aged 18 to 25, at Virginia Tech. To measure the variables, an instrument was developed based on previous studies. Body-cathexis and importance of meeting the ideal body image were measured for five areas of body parts: head/upper body, lower body, height, weight, and torso. Clothing benefits sought had five dimensions: fashion image, figure flaws compensation, sex appeal, self-improvement, and individuality. The clothing attitude measure was modified from that of Shim et al. (1991).

Clothing behavior consisted of clothing preferences for fit/color/style/emphasis, satisfaction with the fit and variety in ready-to-wear, fashion innovativeness, and shopping behavior.

Research hypotheses were tested using multiple regression and Pearson correlation coefficient. The results showed that body-cathexis for specific areas of body parts partially explained clothing benefits sought, clothing attitude, and clothing behavior. There were significant effects of importance of meeting the ideal body image on clothing benefits sought (especially on the self-improvement benefit sought), clothing attitude, and some dimensions of clothing behavior.

A post-hoc analysis was used to investigate the moderating effects of importance of meeting the ideal body image and clothing attitude on the relationship between body-cathexis and clothing benefits sought/ clothing behavior. Multiple regression was used to evaluate the presence, strength, and nature of the interaction effect. The results showed that clothing attitude and importance of meeting the ideal body image were important moderators for the relationship between body-cathexis and clothing benefits sought/ clothing behavior. The relationship varies across the levels of clothing attitude and importance of meeting the ideal body image.

The findings of the study contribute to the literature on the relationships between body-cathexis, clothing benefits sought, clothing attitude, and clothing behavior. Also, the study has managerial implications for apparel manufacturers and retailers.

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CHAPTER I

INTRODUCTION

An understanding of self-concept is important for marketers because much product consumption is influenced by consumers' individual self-images (Onkvisit & Shaw, 1987). Grubb and Grathwohl (1967) discussed the value of self-concept to individual consumers and the direction of behavior toward the maintenance and enhancement of self-concept. Several researchers stressed the symbolic role of products in human social interactions and addressed the symbolic role in relation to protection and enhancement of one's self-concept (Belk, 1988; Schouten, 1991; Solomon, 1983).

Body image is the mental view one has of one's body (Gergen, 1971). Kalish (1975) noted that body image is one of the most important components of self-concept. Physical attractiveness is highly valued in American culture, and the media focus on the young and thin body as an important factor of physical attractiveness (Moriarty & Moriarty, 1988). Dissatisfaction with body image appears to be widespread and a major psychological and physical problem of our time (Salem, 1990). Body dissatisfaction has been described as a "normative discontent" (Rodin, Silberstein, & Striegel-Moore, 1985). In a survey of 33,000 American Glamour readers, 75% of the female respondents considered themselves overweight although fewer than 25% could be categorized as such; only 6% were happy with their bodies (Wooley & Wooley, 1984).

When people are not satisfied with certain aspects of self, the roles of products as symbols and means in social interactions cannot be underestimated (Belk, 1988; Schouten, 1991; Solomon, 1983). Because clothing is an extension of the bodily self (Shim, Kotsiopulos, & Knoll, 1991) and has important symbolic meanings in social interactions (Ericksen & Sirgy, 1989; Hamid, 1972; Lessig & Park, 1978; Robertson, 1970; Veblen, 1899), many studies have concerned the relationship between body image and dimensions of clothing behavior. Yet, very limited studies exist on the relationships between satisfaction with specific body parts and clothing behavior (e.g., Hwang, 1993; Kwon & Parham, 1994). Some researchers suggested that clothing may compensate for body dissatisfaction and enhance one's self-esteem (Burns, 1979; Kaiser, 1990; Sontag & Schlater, 1982). Few theoretical explanations exist, however, on clothing compensation for body dissatisfaction and on clothing benefits people seek in relation to body satisfaction.

Conflicting findings exist in regard to the relationship between body satisfaction and dimensions of clothing behavior (Davis, 1985; Hwang, 1993; Shim, Kotsiopulos, & Knoll, 1991). The relative importance of ideal body image to individual consumers may underlie these conflicting results. Salem (1990) conducted research on the importance of ideal body image to individuals, which she defined as the extent to which it is personally important to meet or be similar to socially ideal standards of attractiveness. Salem found that importance of meeting the ideal body image is a moderator in the relationship between one's body satisfaction and self-esteem.

Although Salem focused on the importance of ideal body image in relation to self-esteem and depression, importance of meeting the ideal body image may apply also to the area of symbolic consumption. If consumers do not care about ideal body image regardless of their body satisfaction, they may not care about clothing or other products as means to enhance their body image. Importance of meeting the ideal body image may be a crucial factor which affects the motives in symbolic consumption. Differences among individual consumers in the relative importance they place on meeting the ideal body image may explain why some consumers are motivated to enhance their self-image through products but why others are not.

From this reasoning, the importance of ideal body image to consumers may be a significant motivator for the benefits consumers seek from clothing and for consumers' purchase or use of clothing in relation to body satisfaction. Although body satisfaction may partially explain some dimensions of clothing benefits sought / clothing behavior, body satisfaction alone cannot explain all the complexities of clothing behavior. Importance of meeting the ideal body image may provide an understanding regarding the relationships between body satisfaction, clothing benefits sought, and clothing behavior; however, almost no research has concerned the influence of the importance of ideal body image on the relationship between body satisfaction and clothing benefits sought/ clothing behavior.

Little empirical research has investigated the kinds of benefits consumers seek from clothing when they are satisfied or dissatisfied with different parts of their bodies. Research on this question may provide insight on the complex consumer motivations in clothing behavior that could be a basis for marketers to segment and target consumers and make plans for them

(e.g., in clothing design, advertising, and distribution). Research on the importance of meeting the ideal body image has theoretical implications in explaining consumer behavior related to body satisfaction. It has implications for the study of symbolic consumption, for example, why some consumers are motivated to enhance their self-image through symbolic consumption but why others are not.

The purpose of the present research is to determine, for a sample of female college students, 1) the effects of body-cathexis on clothing benefits sought, clothing attitude, and clothing behavior and 2) the effects of importance of meeting the ideal body image on clothing benefits sought, clothing attitude, and clothing behavior. Female college students are a major clothing consumer segment, and they are said to be very conscious about their bodies (Fallon & Rozin, 1985; Katzman & Wolchik, 1984; Kwon & Parham, 1994; Salem, 1990; Wendel & Lester, 1988).

CHAPTER II

LITERATURE REVIEW

The study investigates the relationships between body satisfaction, clothing benefits sought, and selected dimensions of clothing behavior with the effects of importance of meeting the ideal body image. The review of literature provides the definitions of major concepts relevant to the research, as well as theories, propositions, and empirical findings of previous studies dealing with major variables of this study.

Symbolic Consumption

The explanation of consumer behavior through research has taken two main approaches. One approach focuses on physical properties or performance-related attributes of products, and commonly uses multiattribute attitude models (Fishbein & Ajzen, 1975; Rosenberg, 1956). The other approach deals with value-expressive, symbolic attributes of products and their relationships with motive, value, mood, and personality which are in the minds of consumers (Belk, 1988; Kassarian, 1971). The commonly used models relate to self-concept in consumer behavior, such as self-image congruence models (Berkman & Gilson, 1986; Sirgy, 1986).

Although many marketers are concerned about physical properties of products, the importance of value-expressive, symbolic attributes of products cannot be underestimated. Engel and Blackwell (1982) noted that value-expressive, subjective attributes of products are

important in consumer choice and behavior. Examining solely the physical attributes of products makes it difficult to capture psychological benefits and motives behind consumer behavior (Shim & Bickle, 1994). Researchers have investigated symbolic consumption in which products serve not only a functional purpose but also express something about consumers (Belk, 1988; Grubb & Grathwohl, 1967; Schouten, 1991; Sirgy, 1982). The basic notion of symbolic consumption is that products serve as symbols so that they may be evaluated and purchased in the context of their symbolic meaning (Zaltman & Wallendorf, 1979).

Hirschman and Holbrook (1981) noted that symbolic consumption deals with consumer behavior associated with the semantic, intangible, subjective aspects of products which exist in the mind of the consumer. Newman (1957) stated that: "Among other things, a product is a symbol by virtue of its form, size, color, and functions. Its significance as a symbol varies according to how much it is associated with individual needs and social interaction. A product, then, is the sum of the meanings it communicates, often consciously, to others when they look at it or use it" (p.100). Because the symbolic qualities of the product stem from the product user's mind, the field of symbolic consumption research has been related to self-concept of consumers.

Self-Concept in Consumer Behavior

Social science researchers generally agree that self-concept plays an important role in human behavior. Self-concept is the total image one has about oneself; it contains one's actual

experiences and interpretations about those experiences (Kalish, 1975). Self-concept includes persons' perceptions of their abilities, personal character, status, role, personal worth, and appearance. Perceptions of self, such as self-evaluation, can influence consumption behavior (Sproles, 1979).

Self-concept theories abound in the literature (Burns, 1979; Cooley, 1902; Epstein, 1980; Gergen, 1971; Gordon & Gergen, 1968; James, 1890; Marcus & Nurius, 1986; Mead, 1934; Walters, 1974). Although problematic issues exist in regard to the conceptualization of the dimensions of the self, most scholars who have researched the self agree on two distinct but interrelated components of self: the self as subject, "I", and the self as object, "me" (Gordon & Gergen, 1968).

Three theorists have aided prominently in the development of self-concept theories. James (1890) divided the self as object into three parts: the material me, the spiritual me, and the social me. Using the symbolic interaction approach, Mead (1934) emphasized that the social self emerges through interactions with significant others. Cooley (1902) discussed that the self is what we imagine others think of us. He defined "looking glass self" as what one thinks others perceive of one's appearance and manners.

Based on theorists' definition of self-concept, there has been a proliferation of self-dimensions in the literature (Marcus & Nurius, 1986; Sirgy, 1982; Walters, 1974). For example, Walters identified the actual self, the ideal self, the apparent self, and the reference group self. The actual self refers to the true identity of abilities and appearance of the person. The ideal self is what a person would like to be. The apparent self is the impression or identity

a person conveys to others. The reference-group self is how a person perceives that others view the person (Sproles, 1979). To elaborate the multiple selves, Marcus and Nurius (1986) claimed that the self is a collection of masks, each being associated with certain social settings. Therefore, self-concepts are diverse and multifaceted.

The multifaceted self-concepts can be conceptualized as having two or more dimensions. Some researchers have treated the self as two dimensions: actual self and ideal self (Belch, 1978; Ross, 1971). Others have treated the self as having more than two dimensions (Burns, 1979; Sirgy, 1982). Sirgy (1982) identified four dimensions of self-concept: actual self-image, ideal self-image, social self-image, and the ideal social self-image. The actual self-image refers to how one sees oneself. The ideal self-image is defined as how one would like to see oneself. The social self-image is defined as how people believe they are seen. The ideal social self-image is how people would like to be seen by others (Sirgy, 1980).

To relate the symbolic value of products to consumer self-concept, Sirgy (1983) developed an integrated self-congruity theory and advanced the notion of self-image/product image congruity. Self-image/product image congruity in general refers to the match or mismatch of one's self-image to corresponding images of the product. The basic premise for this idea is that consumers prefer products with images congruent with their self-images.

Sirgy's (1983) self-congruity theory explains that product cues involving images activate a self-schema involving the same image. As a result of those cues, activated self-schema will influence the value placed on the product and product image attributes. Then the theory shows four different forms of the self-image/product image congruity condition: 1)

positive self-congruity occurs between a positive product-image perception and a positive self-image belief; 2) positive self-incongruity occurs between a positive product-image perception and a negative self-image belief; 3) negative self-congruity occurs between a negative product-image perception and a negative self-image belief; and 4) negative self-incongruity occurs between a negative product-image and a positive self-image belief.

The theory claims that these four congruity conditions will influence purchase motivation differently. Positive self-congruity will result in the strongest purchase motivation, followed by positive self-incongruity, negative self-congruity, and negative self-incongruity. Self-esteem and self-consistency motives are mediating factors to reach the different self-image/product-image congruity conditions, so they are the factors influencing purchase intention or behavior of consumers.

Sirgy (1982, 1986) noted that self-esteem and self-consistency are two main self-concept motives. The self-esteem motive refers to the tendency to seek experiences which enhance self-concept. From a self-esteem perspective, consumers will be motivated to buy a positive product to maintain a positive self-image (positive self-congruity) or to enhance themselves by approaching an ideal image. Consumers will be motivated to avoid self-abasement (negative self-congruity and self-incongruity). On the other hand, the self-consistency motive relates to the tendency for an individual to behave consistently with one's view of oneself. From this perspective, consumers will be motivated to buy a product with an image that is congruent with their self-image beliefs. Therefore, consumers try to maintain consistency between behavior and self-image beliefs (positive and negative self-congruity) and

to avoid dissonance generated from behavior and self-image beliefs (positive and negative self-incongruity).

Numerous empirical studies have applied self-image/product image congruity theory to the consumption of certain products. Much early work treated self-image/product image as a single congruity effect, namely self-congruity (e.g., Bellenger, Steinberg, & Stanton, 1976; Birdwell, 1968; Grubb & Hupp, 1968; Grubb & Stern, 1971). Most of these studies support the relationship between self-congruity and consumer choice. Many other studies, however, have examined the independent effects of ideal congruity versus actual congruity on consumer choice (e.g., Belch, 1978; Dolich, 1969; Ericksen & Sirgy, 1989; Sirgy, 1980). The findings in regard to the differential effects of multiple congruities are not always consistent. In addition, several researchers investigated moderating variables (e.g., product conspicuousness, types of decisions, public self-consciousness, achievement motivation) for their effect on the relationship between self-image/product-image congruity and consumer choice (Dolich, 1969; Dornoff & Tatham, 1972; Ericksen & Sirgy, 1989; Park, 1990). The results were not always consistent although they were generally supportive of the hypothesized relationship.

Body Image

Body image is "a term which refers to the body as a psychological experience and focuses on the individual's feelings and attitudes toward his [sic] own body" (Fisher, 1968, p.x). It is the mental view one has of one's body (Gergen, 1971). Kalish (1975) noted that body image is one of the most important components of the self-concept. Because awareness of the

self begins with experiencing one's body, body image can be considered one of the earliest parts and the basis of self-concept (Burns, 1979; Liskey, 1989).

To evaluate body image, researchers have used body-cathexis, the indication of individuals' satisfaction or dissatisfaction with their different body parts (LaBat & DeLong, 1990; Secord & Jourard, 1953). Many studies have supported the idea that body-cathexis is closely related to a person's global self-image, self-esteem, or self-concept (Kaiser, 1990; Mathes & Kahn, 1975; Secord & Jourard, 1953; Thomas, 1988; Wendel & Lester, 1988).

Secord and Jourard (1953) investigated the relationship between body-cathexis and self-cathexis (defined as the degree of feeling of satisfaction with various aspects of self), and they found significant correlations for men and women. The authors concluded that the respondents had a tendency to cathect their bodies to the same degree and direction as they cathected their self-concepts. In addition, Mathes and Kahn (1975) found that feelings of physical attractiveness were positively correlated with overall self-esteem responses for women but not for men. In a large Glamour magazine survey, Wooley and Wooley (1984) found that 63% of the female participants admitted that weight "often" affected how they felt about themselves and an additional 33% reported that it "sometimes" affected them, for a total of 96% of the survey respondents.

Harter (1985), James (1950), and Watkins and Park (1972) have suggested that dissatisfaction with a particular aspect of self can lead to lower self-esteem, depending on the degree of importance ascribed to that aspect of self. Therefore, if physical attractiveness is important to an individual, poor body image may be expected to have a negative effect on his

or her self-esteem. In a similar vein, Rosen and Ross (1968), who examined the relationship of self-concept, body satisfaction, and importance of 24 body parts, reported a correlation of $r=.52$ between the mean scores for body-image satisfaction and self-concept (as measured by the Adjective Check List). They hypothesized that certain body parts would be more important than others in evaluating body and self-concepts. Indeed, when the importance factor of the items was taken into consideration, the correlation increased ($r=.62$) for items rated above mean importance and decreased ($r=.28$) for those rated below the mean. Therefore, the relationship between body image and self-concept appeared to be a function of the importance of the items entered into the measurements.

However, Mahoney (1974) found that the importance of body parts did not significantly affect the magnitude of correlation. The author concluded that subjective importance of body aspects is not related to the correlations between body-cathexis and self-esteem. There are possible reasons why these results are in conflict with those of Rosen and Ross (1968). One possible reason is that the studies measured the correlations in different ways. Mahoney (1974) calculated five different correlations between body-cathexis and self-esteem for five importance categories from not important at all to very important, but Rosen and Ross (1968) only evaluated the two categories of above and below the mean importance. Another reason may be that Mahoney used the Rosenberg Self-Esteem Scale, whereas the other used the Adjective Check List.

Although Mahoney (1974) and Rosen and Ross (1968) dealt with the impact of importance of body parts, they did not address another factor that may mediate between body

satisfaction and self-esteem: the importance for an individual of meeting current standards of physical attractiveness. Despite the evidence that body dissatisfaction is so widespread, not all women give responses of low self-esteem. In this vein, Salem (1990) investigated the relationship of several variables, body satisfaction, importance of meeting the ideal body image, perceived discrepancy from ideal body image, and body type discrepancy from the ideal, to depression and self-esteem measures in a sample of 164 female college students. Salem found that importance of meeting the ideal body image affected the relationship of body satisfaction to depression and self-esteem scores. There were interaction effects between body satisfaction and importance of meeting the ideal body image on depression and self-esteem scores.

Ideal Body Image. Several researchers have focused on consumer behaviors related to ideal body image in social and cultural settings. Schneider (1953) suggested that the importance of body image in a culture is obvious from the amount of time and effort to modify the body's appearance. Schneider also asserted that people pursued the ideal body image by means of clothes, bleaches, cosmetics, tattoos, and plastic surgery. Jourard and Secord (1955) reported that females tended to modify their appearance by using clothes or cosmetics to comply with some idealized body image in their culture.

The current ideal body image in American culture has been expressed as narrow as an arrow or pencil thin (Freedman, 1986). Colburn (1992) noted that Americans' pursuit of thinness has been cultivated during the past three decades, exemplified by fashion models and Miss America pageant contestants becoming steadily thinner. This phenomenon has resulted in side effects such as dieting illness and flourishing diet industries (Stephens, Hill, & Hanson,

1994). Although as many males as females are not satisfied with some parts of their bodies (Cash, 1990), women are more worried about body weight and consider it a more important component of body satisfaction than do men (Brumberg, 1988; Fallon & Rozin, 1985). Lake (1979) contended that the media influence middle-aged women to diet, stay younger-looking through the use of cosmetics, and disguise "figure flaws" through appropriate selection of clothing.

Perceived Discrepancy from the Ideal Body Image. Since most studies have shown that dissatisfaction with physical appearance is related not to objective ratings of attractiveness but to subjective perception of attractiveness, subjective discrepancy from the current ideal standards may be an important factor in one's body satisfaction. Although many researchers mentioned the media and ideal standards associated with body satisfaction, relatively little empirical research has dealt with this question.

Davis (1985) measured college females' perceived somatotype, perceived somatotype-ideal, and body-cathexis. Most subjects in the study selected the slimmest figure as their somatotype-ideal. Subjects' satisfaction with the body decreased as their perceived body build grew "more muscular" and "fatter." It implies that the discrepancy between one's perceptions of actual and ideal body build creates dissatisfaction with one's own body build.

Using social comparison theory, Richins (1991) investigated the influence of idealized models in ads on self-satisfaction of young adult females. Social comparison was used in the study because humans have a drive to evaluate themselves and to evaluate themselves by comparison with others (Festinger, 1954). This suggests that consumers compare themselves

with persons portrayed in ads. In her study, Richins chose physical attractiveness as the self-perception dimension because it is a salient and important attribute in social interactions. Her formulated hypothesis was that idealized advertising images engendered comparison and resulted in self-doubt and dissatisfaction. The results of the study showed that, as a result of comparison processes, the female subjects were dissatisfied with themselves according to self-discrepancy, a discrepancy between ideal and actual levels of physical attractiveness. Richins concluded that, if consumers compare and evaluate themselves against socially ideal images, then feelings of dissatisfaction would occur when there is a negative discrepancy between ideal and actual self image. Higgins (1987) showed that feelings of dissatisfaction with some aspect of self are likely to occur when one experiences a discrepancy on the attribute that is important to the individual.

The Roles of Products in Social Settings

When social comparison results in discrepancies between ideal and actual self images, the role of products as symbols and means of social interaction cannot be underestimated. Solomon (1983) contended that a significant portion of consumption behavior is actually social behavior. He posited that products have dual functions as stimuli and responses in the social environment. Products can be viewed as responses to social interaction when their roles are to maintain or to enhance self image. In this case, as a result of product consumption, consumers will satisfy their needs and successfully manage their impressions. On the other hand, products

can be viewed as social stimuli. According to Solomon, products are likely to act as stimuli when a discrepancy exists between the ideal set of behaviors related to a given role and the individual's ability to carry out these behaviors.

Using a qualitative approach, Schouten (1991) showed that the motives for cosmetic surgery came from the dissatisfaction with a particular body part or body feature. He reported that his subjects achieved impression management and self-presentation through plastic surgery and that the plastic surgery functioned as social stimuli in the subjects' role transition by the process of symbolic self-completion. Schouten's study has meaningful implications in that he empirically showed the roles of certain products as social responses (impression management) and stimuli (role transition). However, the study has some limitations. Since he used subjects who underwent elective plastic surgery, his findings are limited to people who may be very dissatisfied with their body image. Also, plastic surgery may be an extreme way of altering appearances and a high risk product. Because clothing may be a more moderate means to change or enhance one's appearance and self image and because it is a more commonly consumed product, a study focusing on clothing may contribute to understanding product symbolism in social interactions in the general population.

Clothing Benefits Sought

Clothing has been described as a second skin (Horn & Gurel, 1981) or an extension of the bodily self which represents one's nearest environment (Belk, 1988; Kaiser, 1990).

Clothing has long been recognized as having more than just a functional use; numerous studies

have indicated the symbolic meaning of clothing and its use in social environments (e.g., Ericksen & Sirgy, 1989; Hamid, 1972; Lessig & Park, 1978; Robertson, 1970; Veblen, 1899). However, few empirical studies have focused on benefits, needs, or motives in purchasing clothing from the consumer behavioral perspective (Kwon & Parham, 1994; Shim & Bickle, 1994).

Limited studies exist which can be viewed as benefit segmentation research. Benefit segmentation is defined as a segmentation by "benefit sought" - the kinds of benefits consumers seek in products and services (Schiffman & Kanuk, 1983). Through benefit segmentation, marketers can acknowledge unmet consumer needs and attempt to measure consumer perceptions of various products (Engel, Blackwell, & Miniard, 1990; Peter & Olson, 1987).

The two types of benefits segmentation are person-based and occasion-based (Greenberg & McDonald, 1989). Person-based segmentation attempts to segment consumers on the basis of product purchase motivations wherein they may reflect their personality traits. Occasion-based segmentation focuses on purchase or consumption occasions rather than people, and it may reflect situational role requirement. The former type of segmentation is generally more appropriate when needs and motivations are stable across purchase or usage occasions. The latter is often used when individual needs and motivations tend to vary across purchase or usage occasions. Since many products tend to lie somewhere between these conditions, Greenberg and McDonald (1989) recommended the complementary use of both approaches to capture the psychological complexity of consumers.

In regard to clothing benefit segmentation, Jenkins and Dickey's (1976) work is one of the most representative studies. Jenkins and Dickey surveyed 224 residents of one geographic area and segmented subjects by the evaluative criteria in clothing choices. On the basis of two dimensions (appearance and practicality) of underlying evaluative criteria, four consumer segments were developed: fashion advocates, quality seekers, frugal aesthetes, and concerned pragmatics.

To segment the apparel market by evaluative criteria, Cassill and Drake (1987) identified three evaluative criteria factors that female consumers use for social apparel: appropriateness, economic, and other people directed. The consumer segment who scored high on appropriateness emphasized good fit and the suitability to the individual. The second consumer segment, those scoring high on the economic factor, emphasized price, good buy, and ease of care. The third segment (other people directed) looked for prestige, sexiness, and brand/store name.

Because previous studies (Cassill & Drake, 1987; Jenkins & Dickey, 1976) focused on measuring importance of attributes rather than benefits, Shim and Bickle (1994) investigated clothing benefits sought by female consumers and segmented the consumers in three groups: symbolic/instrumental users of clothing, practical/conservative users of clothing, and apathetic users of clothing. The researchers investigated the three benefit-sought groups in regard to psychographics, shopping orientations, store patronage behavior, and demographics. They found distinct differences among segments concerning these variables. For example, the group named symbolic/instrumental users of clothing actively used clothing as a means to enhance

self-esteem, career advancement, reputation, prestige, femininity, and fashion image. The consumers in this group were innovative, independent, and socially oriented. They were relatively younger and had higher social status. Although Shim and Bickle (1994) showed the importance of clothing benefits sought and the influence of psychographics/demographics on clothing benefits sought, they did not show why people seek different clothing benefits.

In regard to motivations underlying clothing practices, Kwon and Parham (1994) related fatness perception states to motivators of clothing functions, and they identified clothing functions for different fatness perception states: when one felt fat or felt to have gained weight, and when one felt slender or felt to have lost weight. The identified clothing functions were fashion, camouflage, assurance, individuality, and comfort. The research results showed motivational differences between clothing functions for fat and slender states. The scores for camouflage and comfort functions were higher in the fat state, while the scores for all other functions were higher in the slender state. Kwon and Parham concluded that perception states of physical self play a significant role in determining the types of clothing and perception of importance of each clothing function.

Clothing Behavior Related to Body Image

According to Kaiser (1990), one's self-feeling toward the body plays an important role in clothing preferences and attitudes. To investigate the relationship between clothing and body image, researchers have focused on the relationship between body-cathexis and diverse aspects of clothing behavior. LaBat (1988) reported that higher body-cathexis was associated

with more satisfaction with the physical fit of ready-to-wear clothing among female consumers.

LaBat and DeLong (1990) reported a significant relationship between body-cathexis and satisfaction with fit of apparel, especially for satisfaction with apparel fit on lower parts of the body. Hwang (1993) reported significant correlations between body-cathexis and dimensions of clothing behavior in women aged 55 years and older. Women subjects who had higher satisfaction with their body parts had higher satisfaction with ready-to-wear clothing, had a higher degree of shopping interest, had a higher degree of store patronage, and had higher expenditures on clothing. Shim, Kotsiopoulos, and Knoll (1991) also found that those who were satisfied with their bodies and had a favorable attitude toward clothing were likely to be satisfied with ready-to-wear and with product variety/store quality; to enjoy shopping; to be confident in choosing proper clothes for themselves; and to be heavy purchasers of clothing.

Clothing attitude, a dimension of clothing behavior, was investigated by several researchers in regard to body-cathexis. Davis (1985) measured college females' perceived somatotype-self, perceived somatotype-ideal, body-cathexis, and dimensions of clothing behavior (clothing attitude/interest and fashion interest). In examining the relationship between the perceived somatotype and clothing behaviors, the perceived somatotype-self groups did not differ in regard to fashion innovativeness, clothing interest, and clothing attitude. Damhorst and Littrell (1984) also reported lack of correlation between clothing interest and body satisfaction among high school cheerleaders. These findings were contrary to the stereotypic assumptions and to other empirical studies (e.g., Hwang, 1993) about the positive relationship between body-cathexis and clothing attitude/interest. In Hwang's (1993) study, women

subjects who had higher satisfaction with their body parts had a more favorable attitude toward clothing and had a higher degree of self-reported fashion opinion leadership.

Based on the research of Damhorst and Littrell (1984) and Davis (1985), Kaiser (1990) suggested that the relationship between body satisfaction and clothing attitude/clothing interest may not be uni-dimensional and that more research is needed to clarify these relationships. Shim, Kotsiopulos, and Knoll (1991) investigated the interaction of body-cathexis and clothing attitude in the male apparel market, and they grouped their subjects according to clothing attitude and body-cathexis scores. The four groups were characterized by 1) positive body-cathexis/ positive clothing attitude, 2) positive body-cathexis/ negative clothing attitude, 3) negative body-cathexis/ positive clothing attitude, and 4) negative body-cathexis/ negative clothing attitude. These four groups were hypothesized to differ in clothing behavior, shopping behavior, and individual characteristics. Shim et al. suggested that the relationship between body-cathexis and clothing attitude may not be uni-dimensional because the four groups categorized by interactions between body-cathexis and clothing attitude differed in clothing and shopping behavior. However, the relationship between body-cathexis and clothing attitude in their study does not seem clear because they did not measure the correlation between body-cathexis and clothing attitude.

Summary

Many researchers have reported that self-concept is important to consumers and to their product consumption. Researchers have shown the symbolic role of products in social

interactions and addressed the role of products in structuring, maintaining, and enhancing one's self-concept and roles in the society. Body image is one of the most important components of self-concept. Physical attractiveness is highly valued in American culture, and the young and thin body is an important factor of physical attractiveness. Body dissatisfaction is widespread and is a major psychological and physical problem in our time.

Clothing, a product which has both symbolic and physical attributes, may be used to reduce the discrepancy between the ideal and actual body images of consumers. However, little research has investigated the benefits that consumers seek from clothing when they are dissatisfied with their body image. The work of Kwon and Parham (1994) concerning satisfaction with weight dimension only is one of the few studies which deal with the effect of satisfaction with specific body parts on clothing benefits sought and clothing behavior. Furthermore, there are limited studies regarding the importance of ideal body image and its effects in the relationship between body satisfaction, clothing benefits sought, and dimensions of clothing behavior.

If consumers do not care about ideal body image, regardless of their body satisfaction, they may not care about enhancing their body image with clothing or other products because meeting the ideal body image may not be important to them. The importance of meeting the ideal body image may influence clothing benefits sought and clothing behavior because some consumers may actively seek clothing benefits and be involved in clothing behavior if meeting the ideal body image is important to them, but other consumers may not. From this point of view, importance of ideal body image to consumers may provide further understanding of

clothing behavior related to body image. Therefore, it is important to investigate 1) the effects of body-cathexis with different body areas on clothing benefits sought, clothing attitude, and clothing behavior and 2) the effects of importance of meeting the ideal body image on clothing benefits sought, clothing attitude, and clothing behavior.

CHAPTER III

STATEMENT OF PROBLEM

Conceptual Framework

Self-Concept Theory and Body Image. Self-concept is the total image one has about oneself; it contains one's actual experiences and interpretations about those experiences (Kalish, 1975). Because self-concept is related to the totality of self, or global self, many theorists have tried to discriminate the multi-dimensions of the global self. One theorist, James (1890), distinguished two aspects of the global self: "the self as a knower or I" and "the self as known or me." "The self as a knower or I" is related to the process of actual experiencing, whereas "the self as known or me" is concerned with the interpretation of that experiencing.

Actual self is explained in the context of "the self as a knower," and it refers to how one perceives oneself. "The self as known" is composed of "ideal self" and "other self"; ideal self refers to how one would like to perceive oneself, and other self refers to how one believes others perceive oneself (Burns, 1979). Global self satisfaction has been treated as a conscious judgment regarding the relationship of one's actual self to the ideal or other self (Burns, 1979).

Body image is one of the most important components of the self-concept (Kalish, 1975). Body image is "a term which refers to the body as a psychological experience and focuses on the individual's feelings and attitudes toward his [sic] own body" (Fisher, 1968, p.x). Because awareness of the self begins with experiencing one's body, body image can be considered one of the earliest parts and the basis of self-concept (Burns, 1979; Liskey, 1989).

To relate body image and its related variables to self-concept theory, body image is explained in the context of "actual self" because it is associated with "the self as a knower" (Burns, 1979). Ideal body image is related to "ideal self." Body-cathexis, one's satisfaction with body parts, can be explained by "self satisfaction." Body-cathexis (self satisfaction) may be an evaluation through comparing one's body image (actual self) to ideal body image (ideal self) and assessing one's beliefs about how others perceive one's body (other self). These body image variables arising from the self-concept framework can be linked to product consumption through self-concept motives.

Self-Concept Motives. Self-esteem and self-consistency are two motives associated with self-concept, that may influence product consumption. The self-esteem motive refers to the tendency to seek experiences which enhance self-concept. The self-consistency motive relates to the tendency for an individual to behave consistently with one's view of oneself (Sirgy, 1982, 1986). From a self-esteem perspective, consumers will be motivated to buy and use positive products to maintain a positive self-image or to enhance themselves by approaching an ideal image. Consumers will be motivated to avoid self-abasement. From the self-consistency perspective, consumers will be motivated to buy and use products with an image that is congruent with their self-image beliefs. Therefore, consumers try to maintain consistency between behavior and self-image beliefs and to avoid dissonance generated from behavior and self-image beliefs.

Body image variables and clothing consumption behavior can be explained in the context of self-esteem and self-consistency motives. Clothing is an important product because of its close relationship with the body and its symbolic meanings. From a self-esteem perspective, consumers may be motivated to buy and use clothing to maintain a positive body image or to enhance themselves by approaching an ideal body image. On the other hand, from a self-consistency perspective, the pursuit of ideal body image would not be important. Consumers may be motivated to buy and use clothing with an image that is congruent with their body image beliefs.

If these somewhat conflicting self-concept motives exist in the mind of the consumer, what are the variables which can affect these motives? The importance of meeting the ideal body image may be a crucial mediator between these two conflicting motives, although almost no researchers have discussed importance of meeting the ideal image related to self-concept motives. If consumers place great importance on meeting the ideal body image, their self-esteem motives will be strong. However, if consumers do not care about meeting the ideal image, self-consistency motives could outweigh self-esteem motives. Along with this logic, product interest/product attitude may influence the relationship between the product consumption and self-concept motives. For example, if a consumer has a favorable attitude toward clothing and is concerned about meeting the ideal body image, she will have strong self-esteem motives to reach an ideal body image through clothing consumption.

The following discussion addresses how motives are related to benefits sought and consumption attitude/behavior.

Motives, Evaluative Criteria, and Behavior. Motivation is a driving force of an individual to protect, satisfy, and enhance oneself; consumer behaviors are formed to satisfy psychological motivations and needs related to social environment (Kassarjian & Robertson, 1968). According to Grubb and Grathwohl (1967), self-concept is important to the individual and behavior will be geared toward the maintenance and enhancement of self-concept. Epstein (1980) and Sirgy (1982) noted that the self-esteem and self-consistency motives are important in consumption behavior.

Engel and Blackwell (1982) noted that motives function to shape preferences for product attributes and benefits, which are basic factors of evaluative criteria. The effect of motivation might be observed in the evaluative criteria, although the marketer would never measure the motivation directly. The authors discussed that evaluative criteria were found in the form of physical product attributes (objective criteria) as well as subjective factors such as symbolic values and benefits (subjective criteria). In this context, benefits sought can be categorized as subjective evaluative criteria.

In their model related to evaluative criteria, Engel and Blackwell (1982) postulated that beliefs formed through search information and evaluations expressed through evaluative criteria represent attitudes, either favorable or unfavorable, toward the behavior of purchasing and using products. As a result of attitude formation and purchase intentions, consumer behaviors might be determined, then outcomes of purchase might affect satisfaction with products.

Proposed Research Model

A research model is proposed in this study based on previous postulations of researchers (Engel & Blackwell, 1982; Epstein, 1980; Grubb & Grathwohl, 1967; Kassarian & Robertson, 1968). This model identifies five different areas of body parts: head/upper body, lower body, height, weight, and torso. Body-cathexis (body satisfaction), a motive which functions to shape preferences for product attributes and benefits, exerts influence on clothing benefits sought. Kwon and Parham (1994) identified fatness states and weight satisfaction as motives in clothing benefits sought. In the model here, the five clothing benefits sought are fashion image, figure flaws compensation, sex appeal, self-improvement, and individuality. These five benefits are thought to be associated with body satisfaction. The model proposes the effect of importance of meeting the ideal body image on clothing benefits sought (Figure 1). If consumers care about meeting the ideal body image, they may seek benefits from clothing to enhance their body image and self-esteem.

Body-cathexis, a motive which functions to shape preferences for clothing attributes and benefits, will affect attitudes toward clothing as well as behaviors related to clothing (fashion innovativeness, satisfaction with ready-to-wear, clothing preferences, and shopping behavior). Importance of meeting the ideal body image also will affect clothing attitude and dimensions of clothing behavior.

Conceptual definitions

Body image: the mental view one has of one's own body, as a component of self-concept (Gergen, 1979).

Body-cathexis: the "degree of satisfaction or dissatisfaction with the various parts or processes of the body" (Secord & Jourard, 1953, p.343). LaBat and DeLong (1990) considered body-cathexis as an integral part, and the evaluative dimension, of body image.

Importance of meeting the ideal body image: the extent to which it is personally important to meet or be similar to the ideal standards of body image attractiveness (Salem, 1990).

Clothing benefits sought: desired psychological outcomes from choice or consumption of clothing. They include fashion image, figure flaws compensation, sex appeal, self-improvement, and individuality.

Fashion image: degree to which one seeks to maintain a fashionable image through the use of clothing (Shim & Bickle, 1994).

Figure flaws compensation: degree to which one uses clothing as a tool to make one's figure look like the ideal (Shim & Bickle, 1994).

Sex appeal: degree to which one uses clothing to enhance one's femininity (Shim & Bickle, 1994).

Self-improvement: degree to which one uses clothing to enhance one's self-esteem and reputation (Shim & Bickle, 1994).

Individuality: degree to which one uses clothing to appear unusual and distinctive (Kwon & Parham, 1994; Shim & Bickle, 1994).

Clothing attitude: degree to which one considers clothing important and uses clothing as a means of social interaction (Shim, Kotsiopoulos, & Knoll, 1991).

Clothing behavior: consumer behavior related to purchasing and using clothing. It includes clothing preferences, fashion innovativeness, satisfaction with ready-to-wear, and shopping behavior.

Clothing preferences: degree to which one tends to select clothing in terms of tightness of fit, darkness of color, types of style (formal, sexy, dramatic), and certain body area emphasis (waist, bust, neck, legs, hips).

Fashion innovativeness: degree to which one tries new things and ideas in clothing fashions (Shim et al., 1991).

Satisfaction with ready-to-wear: degree to which one is satisfied with ready-to-wear clothing in terms of fit, in several body areas, and variety, in available sizes, styles, and colors/prints (LaBat & DeLong, 1990; Shim & Kotsiopoulos, 1990).

Shopping behavior: consumer behavior related to search and purchase processes for ready-to-wear clothing. It includes in-store shopping interest and catalog shopping.

In-store shopping interest: degree of liking and enjoying in-store shopping for clothing (Shim & Kotsiopoulos, 1990).

Catalog shopping: degree to which one is willing to buy or does buy clothes by catalog or mail (Shim et al., 1991).

Research Problem

The purpose of this study is to determine, for a sample of female college students, 1) the effects of body-cathexis on clothing benefits sought, clothing attitude, and clothing behavior and 2) the effects of importance of meeting the ideal body image on clothing benefits sought, clothing attitude, and clothing behavior.

Objectives

1. To determine the influence of body-cathexis on the following variables:
 - a. clothing benefits sought
 - b. clothing attitude
 - c. clothing behavior.
2. To determine the effect of importance of meeting the ideal body image on the following variables:
 - a. clothing benefits sought
 - b. clothing attitude
 - c. clothing behavior.

Research Hypotheses

Research hypotheses are formulated based on the models of specific relationships between five areas of body-cathexis, five dimensions of clothing benefits sought, and four dimensions of clothing behavior (Appendix A); the specific relationships of the variables are the major concern of the study, and the rationale for the relationships stems from the results of previous studies, from theories, and from reasoning. Figures 11 to 15 in Appendix A represent the influence of each area of body-cathexis on the dimensions of clothing benefits sought; the various parts of hypothesis 1 are formulated based on the relationships shown by these figures. The influence of each area of body-cathexis on clothing attitude and clothing behavior is shown in Figures 16 to 20; hypothesis 2 is formulated based on the relationships shown by those figures. Hypotheses 3 and 4 deal with the effects of importance of meeting the ideal body image on clothing benefits sought, clothing attitude, and clothing behavior. Hypothesis 3 examines the effects of importance of meeting the ideal body image and body-cathexis on clothing benefits sought. Hypothesis 4 investigates the effects of importance of meeting the ideal body image and body-cathexis on clothing attitude and clothing behavior.

Hypothesis 1 : Influence of body-cathexis on clothing benefits sought

H1a: Fashion image is a direct function of the body-cathexis scores for the head/upper body, lower body, height, weight, and torso.

H1b: Figure flaws compensation is an inverse function of the body-cathexis scores for the lower body, height, weight, and torso.

H1c: Sex appeal is a direct function of the body-cathexis scores for the head/upper body, lower body, height, weight, and torso.

H1d: Self-improvement is a direct function of the body-cathexis scores for the head/upper body, lower body, height, weight, and torso.

H1e: Individuality is a direct function of the body-cathexis scores for the head/upper body, lower body, height, weight, and torso.

--- The hypotheses regarding fashion image, sex appeal, and self-improvement (H1a, H1c, H1d) are explained by self-congruity theory and socialization theory. The individual is likely to experience self-congruity with ideal body image. Experiencing positive self-congruity with ideal body image makes the individual satisfied with her body image, which enhances self-esteem (self-congruity theory). Ideal body image is likely to be associated with clothing, the body image of fashion models, and sex appeal. This is because fashion models are idealized for their figure and considered sex symbols (socialization theory). Therefore, the more a person is satisfied with her body the more likely that she will seek to maintain a fashionable image through clothing and to use clothing to enhance her femininity and self-esteem.

The hypothesized inverse relationship between body-cathexis and the use of clothing to compensate for figure flaws, in order to approach the ideal (H1b), may be understood through the theory of symbolic self-completion. According to Wicklund and Gollwitzer (1982), individuals attempt to achieve and maintain a complete identity. Once a person adopts a particular self-definition, then the individual seeks potential symbols to

pursue completeness. Dissatisfaction with the body may give a sense of incompleteness. The more a person is dissatisfied with their lower body, height, weight, and torso areas, the more she will seek figure flaws compensation through clothing. Kwon and Parham (1994) found a negative relationship between weight satisfaction and clothing camouflage function. The body-cathexis for head/upper body is excluded from H1b because that area is considered to be unrelated to the use of clothing to cover figure problems.

Consumers' need for uniqueness, as posited in motivation theory, may explain the hypothesis about individuality (H1e). Individual consumers have needs for uniqueness and pursue individuality through product consumption. According to Schiffman and Kanuk (1994), self-confidence may be an important motivator which influences people to pursue individuality and distinctiveness. If consumers are self-confident, they may have a tendency to be unique and distinctive from others. Body satisfaction could be an important factor in an individual's self-confidence because body satisfaction is the basis of self-concept and because physical attractiveness is culturally valued in today's society. Therefore, one's satisfaction with her body may serve as an important motivator of individuality. Kwon and Parham (1994) found a positive relationship between the seeking of individuality in clothing and weight satisfaction.

*Hypothesis 2: Relationships of body-cathexis to clothing attitude and
clothing behavior*

H2a: Clothing attitude is a direct function of the body-cathexis scores for the head/upper body, lower body, height, torso, and weight.

--- The multi-attribute attitude model may explain the relationship between body satisfaction and clothing attitude (H3a). The model proposes that attitude = $\sum b_i e_i$ (where b_i = i th attribute related to the product, and e_i = evaluation of the i th attribute). Clothing is an extension of one's bodily self; thus, one's body image may serve as an attribute which is related to clothing. Therefore, clothing attitude is a function of body image (b_i) and the evaluation of the body image (e_i). The more satisfied a person is with her body, in the areas of head/upper body, lower body, height, torso, and weight, the more favorable may be her attitude toward clothing. Hwang (1993) showed that clothing attitude is positively related to the body-cathexis scores for the head/upper body, lower body, and weight of women subjects aged 55 years and older.

H2b-1: Clothing preference for sexy styles is a direct function of the body-cathexis scores for the head/upper body, lower body, height, weight, and torso.

H2b-2: Clothing preference for leg emphasis is a direct function of the body-cathexis scores for the lower body and height.

H2b-3: Clothing preference for waist/hip emphasis is positively related to the body-cathexis score for weight.

H2b-4: Clothing preference for bust/neck emphasis is positively related to the body-cathexis score for torso.

H2b-5: Clothing preference for tight fit is a direct function of the body-cathexis scores for weight and torso.

H2b-6: Clothing preference for bright colors is positively related to the body-cathexis score for weight.

--- The theory of reasoned action and the multi-attribute attitude model explain H3b (H3b-1 to H3b-6). The theory of reasoned action suggests that the best predictor of behavior is the intention to act. A person's intention is a function of attitude toward behavior and subjective norm; in turn, attitude is a function of beliefs (that the behavior leads to certain outcomes) and evaluation of the outcomes (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975).

To apply the theory of reasoned action and the multi-attribute attitude model to H2b, clothing preference for certain styles is determined by the intention to prefer certain styles. This intention is a function of attitude toward preferring certain styles. The attitude toward preferring certain styles is a function of attributes related to clothing preference for certain styles and evaluation of the attributes ($\text{attitude} = \sum b_i e_i$). Body image is one of the attributes which are related to clothing preference for certain styles. Therefore, the attitude toward preferring certain styles is a function of body image which is related to those clothing styles and of the evaluation of the body image. The more satisfied one is

with body image which is related to those clothing styles, the more she will prefer those styles.

In H2b-1, body image for all five body areas are related to clothing preference for sexy styles. The more one is satisfied with the five body areas, the more she will prefer sexy style clothing. In regard to H2b-2 to H2b-4, clothing preference for a certain body area emphasis is related to body image for the body area. The more satisfied one is with a body area, the more she will prefer clothing that emphasizes that body area. In H2b-5, the tightness of fit in clothing is generally determined by garments' dimensional ease for torso and weight-related areas (e.g., bust, waist, hips, thighs). The more satisfied one is with weight and torso, the more she will prefer tight fit clothing. Finally, clothing preference for bright colors is related to body image for weight area. Bright colors can make objects stand out visually, and can make the objects look larger than do dark colors. The more satisfied one is with weight, the more she will prefer bright colored clothing (H2b-6).

H2c-1: Satisfaction with pant length in ready-to-wear is a direct function of the body-cathexis scores for the lower body and height.

H2c-2: Satisfaction with the fit at thighs/hips/waist is positively related to the body-cathexis score for weight.

H2c-3: Satisfaction with the fit at bust and neckline is positively related to the body-cathexis score for torso.

H2c-4: Satisfaction with the variety in ready-to-wear is a direct function of the body-cathexis scores for height and weight.

--- Symbolic interaction theory and social comparison theory may provide an explanation for the hypotheses regarding body-cathexis and satisfaction with ready-to-wear (H2c-1 to H2c-4). Symbolic interaction theory may support the idea that the current ideal body image of the society is reflected in ready-to-wear clothing (LaBat & DeLong, 1990). When people wear ready-to-wear clothing, they may compare their body image to the current ideal body image which is reflected in ready-to-wear clothing. As a result of social comparison, the more satisfied one is with certain body areas, the more satisfied she may be with the aspects of garments which are related to those body areas. It means that she will respond to (interact with) the current ideal body image by her degree of satisfaction with the ready-to-wear clothing. She may feel not only physical comfort but also psychological comfort. Individuals who are not satisfied with their body parts may feel frustrated and dissatisfied with ready-to-wear clothing as a result of comparison with ideal standards which are incorporated in the ready-to-wear.

In this context, the relationship between satisfaction with a body area and satisfaction with fit of ready-to-wear related to the body area (H2c-1 to H2c-3) may be explained. For example, the fit at thighs/hips/waist is related to body weight. The more satisfied one is with her weight, the more satisfied she will be with fit at the thighs/hips/waist in ready-to-wear. However, the more dissatisfied one is with her weight, the more dissatisfied she will be with ready-to-wear fit at the area which is related to

weight as a result of comparison with the ideal weight which is incorporated in thighs/hips/waist in ready-to-wear clothing (H2c-2). Similar arguments apply to H2c-1 and H3c-3 because these hypotheses also deal with satisfaction with certain body areas and satisfaction with the fit of ready-to-wear related to those areas. LaBat (1988) reported that higher body-cathexis was associated with more satisfaction with the physical fit of ready-to-wear clothing among female consumers. LaBat and DeLong (1990) reported a significant positive relationship between body-cathexis and satisfaction with fit of apparel, especially for satisfaction with apparel fit on lower parts of the body. Hwang (1993) reported positive correlations between body-cathexis for weight and satisfaction with ready-to-wear.

In addition to the fit satisfaction, the hypothesis about satisfaction with the variety of ready-to-wear (H2c-4) may be explained by symbolic interaction theory and social comparison theory. Variety of ready-to-wear includes available size range and style selection of ready-to-wear clothing. The sizing and style of ready-to-wear is related to height and weight body areas. For example, size 10 may indicate certain height (e.g., 5'6"-5'7") and waist (e.g., 27"-28") ranges. The more satisfied one is with her height and weight, the more satisfied she will be with the variety of ready-to-wear. However, the more dissatisfied one is with her height and weight, the more dissatisfied she will be with the variety of ready-to-wear which incorporates ideal standard height and weight. One's comparison with the current ideal may make her dissatisfied with ready-to-wear.

H2d-1: In-store shopping interest is a direct function of the body-cathexis scores for head/upper body, lower body, height, weight, and torso.

H2d-2: Catalog shopping is a function of the body-cathexis scores for head/upper body, lower body, height, weight, and torso.

--- The hypotheses about body-cathexis and shopping behavior (H2d-1 and H2d-2) may be explained by the theory of reasoned action and multi-attribute attitude model. In-store shopping behavior (liking and enjoying in-store shopping) is determined by intention to shop in stores. This intention is a function of attitude toward in-store shopping. The attitude toward in-store shopping is a function of attributes related to shopping and of evaluation of the attributes ($\text{attitude} = \sum b_i e_i$). Clothing is an extension of one's bodily self, and body images reflected in the clothing may be attribute related to shopping behavior (search process for clothing for one's body). In the H2d-1, attitude toward in-store shopping is a function of body image (b_i) and of evaluation of body image (e_i). If a person is satisfied with her head/upper body, lower body, height, and torso, and weight, she may have a favorable attitude toward in-store shopping. Hwang (1993) showed that in-store shopping interest is positively related to the body-cathexis scores for head/upper body, height, and weight of women aged 55 years and older.

To apply the theory of reasoned action model and multi-attribute attitude model to the hypothesis about catalog shopping (H2d-2), catalog shopping behavior is determined by intention to shop by catalogs. This intention is a function of attitude toward catalog shopping. The attitude toward catalog shopping is a function of attributes related to

shopping and of evaluation of the attributes ($\text{attitude} = \sum b_i e_i$). In H2d-2, attitude toward catalog shopping is a function of body image (b_i) and of evaluation of body image (e_i).

The satisfaction with body areas such as head/upper body, lower body, height, and torso, and weight may influence attitude toward catalog shopping; however, the directionality of the relationship is not hypothesized. People who are satisfied with their bodies may have a favorable attitude toward catalog shopping because it is a means to find clothing for their bodies. However, people who are satisfied with their bodies may have a negative attitude toward catalog shopping because it may not provide various benefits when searching for proper clothes for their bodies.

H2e: Fashion innovativeness is a direct function of the body-cathexis scores for head/upper body, lower body, height, weight, and torso.

--- The theory of reasoned action, multi-attribute attitude model, and fashion process theory may provide an understanding for H2e. Fashion innovativeness is determined by the intention to try new clothing fashions. Intention to try new fashions is a function of attitude toward trying new fashions. This attitude is a function of attributes related to trying new fashions and of the evaluation of the attributes ($\text{attitude} = \sum b_i e_i$). In H2e, attitude toward trying new fashions is a function of body image (b_i) and evaluation of body image (e_i). If a person is satisfied with her head/upper body, lower body, height, torso, and weight, she may have a favorable attitude toward trying new fashions. Fashion process theory supports this idea. Fashion innovativeness requires some individuality and

feelings of security (Kaiser, 1990). One's satisfaction with her body parts may provide feelings of security and individuality, which leads to fashion innovativeness.

*Hypothesis 3: Effects of importance of meeting the ideal body image and
body-cathexis on clothing benefits sought*

H3a: Fashion image is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image (IMI) for the five areas.

H3b: Figure flaws compensation is a function of the body-cathexis scores for four areas (lower body, height, weight, and torso) and IMI for the four areas.

H3c: Sex appeal is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and IMI for the five areas.

H3d: Self-improvement is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and IMI for the five areas.

H3e: Individuality is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and IMI for the five areas.

--- Hypothesis 3 dealt with the direct effect of importance of meeting the ideal body image (IMI) on clothing benefits sought. When meeting the ideal body image is considered to be important, the individual is likely to doubt her body image; high IMI may threaten her self-evaluation and self-esteem. To resolve the tension state which is resulted

from high IMI, the individual may seek benefits from clothing. As IMI becomes higher, the more likely that she will seek benefits from clothing to reach the ideal body image and to enhance her self-esteem.

There are several ways of dealing with the tension state and to enhance her self-esteem. First, the more that she considers meeting the ideal body image important, the more she will seek fashion image and sex appeal benefits from clothing; ideal body image is likely to be associated with the body image of fashion models and sex appeal (H3a & H3c). The other way of dealing with the tension state is to seek figure flaws compensation through clothing to reach an ideal body image (H3b). In addition, she may use clothing as a means for self-improvement because her self-esteem may be threatened by high IMI (H3d). Another way to enhance her self-esteem is that she may seek the individuality benefit through clothing. Seeking the individuality may resolve the tension state which is resulted from high IMI. Putting more stress on individuality can outweigh her concern about meeting the ideal body image, which results in self-esteem enhancement (H3e).

*Hypothesis 4: Effects of importance of meeting the ideal body image and
body-cathexis on clothing attitude and clothing behavior*

H4a: Clothing attitude is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image for the five areas.

--- If meeting the ideal body image is important, the individual is likely to seek products to reduce the gap between actual and ideal body image through the self-esteem motive.

Clothing is a second skin and it is an important means in enhancing one's self image. The more one considers meeting the ideal body image important, the more likely that she will use clothing as a means to reduce the gap between actual and ideal body image and to make her body look like the ideal.

H4b-1: Satisfaction with pant length in ready-to-wear is a function of the body-cathexis scores for two areas (lower body and height) and importance of meeting the ideal body image (IMI) for the two areas.

H4b-2: Satisfaction with the fit at thighs (H5c-2')/hips (H5c-2'')/waist (H5c-2''') is a function of the body-cathexis score for weight and IMI for weight.

H4b-3: Satisfaction with the fit at bust (H5c-3') and neckline (H5c-3'') is a function of the body-cathexis score for torso and IMI for torso.

H4b-4: Satisfaction with the variety in ready-to-wear is a function of the body-cathexis scores for two areas (height and weight) and IMI for the two areas.

--- If meeting the ideal body image is important, the individuals are likely to seek ready-to-wear clothing to reduce the gap between actual and ideal image. Consumer satisfaction theory discusses that consumers may be dissatisfied with products when their high expectations and standards are not met. Placing importance on meeting the ideal body image may indicate heightened standards for clothing. The ideal body image is incorporated in ready-to-wear clothing, which can bring about consumers' comparisons of their own bodies with the ideal body image. Because it may be hard to find the proper clothing to reduce the gap between actual and ideal body image (especially in ready-to-wear), consumers may be dissatisfied with the ready-to-wear if meeting the ideal body image is important to them. Therefore, the more that meeting the ideal body image is important, the more dissatisfied consumers may be with ready-to-wear clothing.

The effects of importance of meeting the ideal body image in H4b-1 to H4b-4 can be explained in this context. The more that meeting the ideal body image for certain body areas is important, the more dissatisfied consumers may be with the aspect in ready-to-wear clothing which is related to those body areas. In the case of H4b-1, the more the importance of meeting the ideal height and lower body, the more dissatisfied consumers may be with the pant length in ready-to-wear. The reasoning behind H4b-1 may be applied to the rest of the hypotheses (H4b-2 to H4b-4) involving different body areas and aspects of ready-to-wear which relate to those body areas (i.e., the body area = weight and the aspect of ready-to-wear which relates to weight = the fit at thighs/hips/waist in H4b-2; the body area = torso and the aspect of ready-to-wear which relates to torso = the

fit at bust and neckline in H4b-3; the body areas = height and weight, and the aspect of ready-to-wear which relates to height and weight = the variety in ready-to-wear in H4b-4).

H4c-1: In-store shopping interest is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image for the five areas.

H4c-2: Catalog shopping is a function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image for the five areas.

--- If meeting the ideal body image is important, individuals are likely to shop for proper clothing to reduce the gap between actual and ideal image. The more the individuals consider meeting the ideal body image important, the more they will like in-store shopping, which provides a variety of clothing to enhance their self image. However, in regard to catalog shopping, the effect of importance of meeting the ideal body image may be positive or negative. Catalog shopping is a way to find clothes, but the individuals may avoid catalog shopping because it may not provide various benefits when searching for proper clothes for their bodies.

H4d: Fashion innovativeness is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image for the five areas.

--- If meeting the ideal body image is important, the individuals are likely to try new clothing fashions to reduce the gap between actual and ideal image. They may try new ideas and things in clothing to enhance their body image and make their bodies look like the ideal.

Links between Objectives and Hypotheses

The links between objectives and hypotheses are presented in Table 1. To determine the effects of body-cathexis on clothing benefits sought, clothing attitude, and clothing behavior, hypotheses 1 and 2 are formulated. For the effects of importance of meeting the ideal body image, hypotheses 3 and 4 are formulated.

Table 1: Links between objectives and hypotheses

Objectives	Hypotheses
To determine the effects of body-cathexis on the following variables: a. clothing benefits sought b. clothing attitude c. clothing behavior	H1: Influence of body-cathexis on clothing benefits sought H2: Relationships of body-cathexis to clothing attitude and clothing behavior
To determine the effects of IMI on the following variables: a. clothing benefits sought b. clothing attitude c. clothing behavior	H3: Effects of IMI and body-cathexis on clothing benefits sought H4: Effects of IMI and body-cathexis on clothing attitude and clothing behavior

Limitations

1. Since the sample is not randomly selected, the interpretation of the findings cannot be generalized to the whole female college student population.
2. Results are influenced by the subjects' ability and willingness to respond to the questionnaire.
3. Limitations due to the nature of the rating scale should be considered. Subjects may think that intervals of the rating scale are not equal for them, although the rating scale is assumed to have equal intervals. Also, the rating scale has a lack of objectivity since there is no objective standard for subjects' ratings.

Assumptions

1. The subjects understand and respond to the questionnaire correctly and honestly.
2. Major constructs such as body-cathexis, importance of meeting the ideal body image, clothing benefits sought, and clothing behavior are validly measured.

CHAPTER IV

PROCEDURE

The purpose of this study was to determine the effects of body-cathexis on clothing benefits sought and selected dimensions of clothing behavior. The study also examined the effects of importance of meeting the ideal body image on those variables. Subjects were female college students at Virginia Tech. The questionnaire to measure the variables was adapted from previous studies. Statistical analysis was employed to investigate the relationships between the variables and to test the hypotheses.

Subjects and Questionnaire Administration

The subjects were female college students, aged 18 to 25, at Virginia Tech. Four course instructors agreed to allow the administration of the questionnaire to students in their classes. The researcher made an announcement about the research and procedure at the beginning or at the end of the classes. The four classes, all in the College of Human Resources, were a human nutrition class, a professional seminar class, and two clothing and textiles classes (one an introductory class and one a design class). The researcher stood at the classroom door to distribute the cover letter and the self-administered questionnaire to the students as they exited. The researcher distributed 420 questionnaires (300 questionnaires to the human nutrition class, 70 to the professional seminar class, 30 to the introductory clothing and textiles class, and 20 to the design class). The students returned the questionnaires by campus mail or brought them back to the classes; the researcher was available at the classroom doors for

several times after the distribution. There were 182 questionnaires returned, but some questionnaires were not usable because subjects were males or older than 25. The final sample of usable cases was 177 female college students, aged 18 to 25.

The questionnaire and a statement of the research purpose were submitted to the Human Subjects Review Committee at Virginia Tech and received approval.

The Instrument and the Variables Measured

The questionnaire instrument is in Appendix B. The variables measured by it are as follow.

Body-cathexis is defined as the scores of subjects after rating their satisfaction with five areas of body parts on a 7-point Likert scale as follows: extremely satisfied (7), quite satisfied (6), slightly satisfied (5), neither (4), slightly dissatisfied (3), quite dissatisfied (2), extremely dissatisfied (1). The five areas encompassing 19 body parts are lower body (legs, calves, knees, feet), head/upper body (face, hair, eyes, nose, teeth, voice), height (overall height, leg length), weight (overall weight, waist, hips, thighs), and torso (bust, neck, muscular strength). The body-cathexis scale is Section A of the questionnaire. The measure of body-cathexis is modified from that of Shim, Kotsiopulos, and Knoll (1991).

The original body-cathexis scale was developed by Secord and Jourard (1953), and it has 46 items. Many contemporary studies use modified body-cathexis scales with fewer items (Shim et al., 1991). Shim et al. (1991) used the modified 23-item body-cathexis scale of

Mahoney and Finch (1976), and measured body-cathexis by male subjects' indication of their satisfaction with each body area including lower body, head/upper body, height, weight, and torso on a Likert scale, from very positive to very negative. Hwang (1993) used a modified 18-item body-cathexis scale for elderly men and women subjects; thighs were omitted because men and women have different views for thighs. Cronbach alpha coefficients for the five areas of body-cathexis in Hwang's research ranged from 0.62 to 0.91, indicating good reliability.

Due to the summation of individual scores for six body parts, the score on the head/upper body area has a possible range from 42 to 6. Similarly, the scores on other areas have the following ranges: lower body (from 28 to 4), height (from 14 to 2), weight (from 28 to 4), and torso (from 21 to 3).

Importance of meeting the ideal body image is measured by the scores on the importance of meeting the ideal scale in Section B of the questionnaire. Respondents are asked to indicate how important it is that they meet what they consider the ideal standards for the same 19 body parts as on the body-cathexis scale. The response format is a 7-point Likert scale as follows: extremely important (7), quite important (6), slightly important (5), neither (4), slightly unimportant (3), quite unimportant (2), extremely unimportant (1). The measure is adapted from Salem's (1990) study. The possible range of the score for each body area is the same as in the body-cathexis measure.

Clothing benefits sought is defined as scores indicated by subjects' degree of agreement with statements adapted from Shim and Bickle (1994) and Kwon and Parham (1994) reflecting five clothing benefits sought, on a 5-point Likert scale ranging from strongly agree (5) to

strongly disagree (1). The five clothing benefits sought are self-improvement, sex appeal, fashion image, figure flaws compensation, and individuality. Shim and Bickle identified nine clothing benefits sought; the five clothing benefits sought in this study were chosen based on their possible association with body satisfaction. The item numbers indicated below refer to pertinent ones in questionnaire Section C which contains 50 items total.

Fashion image includes three items: “Wearing the latest styles is important to me in order to maintain a fashionable image,” “I try to select updated fashions and accessories,” and “I try to select clothes that portray a fashionable image” (numbered 1, 14, and 46). The possible score ranges from 15 to 3.

Figure flaws compensation has three items: “I try to cover my figure flaws with clothing,” “I select clothing that will camouflage my figure problems”, and “I use clothing as a tool to make my figure look like the ideal” (numbered 4, 17, and 36). The possible score ranges from 15 to 3.

Sex appeal has three items: “Dressing to appeal to the opposite sex is important to me,” “I dress to impress the opposite sex,” and “I buy clothes which will emphasize my femininity” (numbered 2, 15, and 48). The possible score ranges from 15 to 3.

Self-improvement has three items: “The clothing I choose to wear is a way of lifting my self-esteem,” “I select clothing to enhance other people’s regard for me,” and “I select clothing that I think will enhance my reputation” (numbered 5, 16, and 50). The possible score ranges from 15 to 3.

Individuality has three items: "I am concerned with dressing for individuality," "I tend to select clothes that are unusual," and "I try to choose clothes that make me look distinctive" (numbered 20, 31, and 37). The possible score ranges from 15 to 3.

Clothing attitude is defined as scores indicated by subjects' degree of agreement with five items on a 5-point Likert scale ranging from strongly agree (5) to strongly disagree (1). The total possible score ranges from 25 to 5. Shim, Kotsiopulos, and Knoll (1991) used five clothing-attitude items in their study, and these five items (numbered 3,8,21,39, and 44 in Section C of the questionnaire) are used in this study. Shim et al. found a Cronbach coefficient of 0.87 for the measure, indicating high reliability.

Clothing behavior includes clothing preferences, satisfaction with ready-to-wear, fashion innovativeness, and shopping behavior. The response format is a 5-point Likert scale ranging from strongly agree (5) to strongly disagree (1). The item numbers indicated below refer to pertinent ones in questionnaire Section C.

Clothing preferences includes fit, color, style, and emphasis.

Fit is measured by subjects' degree of agreement with two items concerning tightness of fit adapted from Kwon and Parham (1994). The two items are "I tend to select clothes that fit tightly to my figure" and "I tend to select loosely fitting clothes" (numbered 6 and 22). Reversed coding is used for scoring the item 22, so the higher the score, the more tight fit is preferred. The possible score ranges from 10 to 2.

Color is measured by subjects' degree of agreement with two items concerning darkness of color from Kwon and Parham (1994). The two items are "I tend to select clothes

that are dark colored” and “I tend to select clothes that are bright colored” (numbered 19 and 41). Reversed coding is used for scoring the item 41, so the higher the score, the more dark colors are preferred. The possible score ranges from 10 to 2.

Style includes formal, sexy, and dramatic styles. For each style, preference is measured by subjects' degree of agreement with an item. Each item contains the same wording, for example, “I like to select sexy styles of clothing as a matter of preference.” The three items are numbered 18, 29, and 40. The possible score for each item ranges from 5 to 1.

Emphasis at five body parts, waist, bust, neck, legs, and hips, is measured. For each body-part emphasis, preference is measured by subjects' degree of agreement with an item. Each item contains the same wording, for example, “I like to select clothing which emphasizes my waist.” Five items (numbered 7,24,30,35,and 42) are used in this study. The possible score for each item ranges from 5 to 1.

Satisfaction with ready-to-wear includes fit and variety.

Fit is defined as scores obtained by subjects indicating their degree of agreement with the items regarding satisfaction with fit of ready-to-wear. The items come from LaBat and DeLong (1990) and deal with satisfaction with pant length and with fit at thighs, hip, waist, bust, and neckline in ready-to-wear clothing. The six items are numbered 10, 23, 27, 34, 38, and 45. The possible score for each item ranges from 5 to 1.

Variety is defined as the sum of the scores obtained by subjects indicating their degree of agreement with three items regarding satisfaction with the variety of ready-to-wear. The three items come from Shim and Kotsiopoulos (1991). They are “I am satisfied with the

available size range of ready-to-wear clothing,” “I am satisfied with the available style selection in ready-to-wear clothing,” and “I am satisfied with the variety of colors/prints in ready-to-wear clothing” (numbered 11, 26, and 33). The possible score ranges from 15 to 3.

Fashion innovativeness is defined as the sum of the scores obtained by subjects indicating their degree of agreement with three fashion innovativeness items from Shim, Kotsiopulos, and Knoll (1991). The three items are "I try something new in the each season's fashions," "I am usually among the last to try new clothing fashions," and "I am willing to try new clothing fashion ideas" (numbered 12, 25, and 43). Reversed coding is used for scoring the item 25. The possible score ranges from 15 to 3.

Shopping behavior includes in-store shopping interest and catalog shopping.

In-store shopping interest is defined as the sum of the scores obtained by subjects indicating their degree of agreement with shopping interest items adapted from Shim, Kotsiopulos, and Knoll (1991). The three items are "In general, I find in-store shopping for clothes enjoyable," "It is fun to go to a store to shop for clothes," and "I enjoy browsing in stores even when I am not out to buy clothes" (numbered 9,32, and 49). The possible score ranges from 15 to 3. Hwang (1993) used the first and the last of the three items and reported 0.74 for the Cronbach Alpha coefficient of the measure.

Catalog shopping is defined as the sum of the scores obtained by subjects' degree of agreement with three catalog-shopping items from Shim et al. (1991). The three items are “I am willing to buy my clothes by mail,” “I buy my clothes by catalog order,” and “I believe that

catalog shopping for apparel offers what I need” (numbered 13, 28, and 47). The possible score ranges from 15 to 3.

Demographics include age, sex, and academic level (Section D of the questionnaire). The demographic information is used to describe the sample.

Pilot Test. The questionnaire described above, and contained in Appendix B, is a modification of the initial questionnaire administered in a pilot test. The initial, pilot-tested questionnaire is in Appendix C. Twenty-three female college students, aged from 18 to 25, who took Clothing and Textiles courses at Virginia Tech responded to the questionnaire in early May 1995. Results indicated that the measure of clothing expenditure had a problem; respondents did not have an accurate idea about their clothing expenditure. To avoid confounded results and interpretation, the variable of clothing expenditure was eliminated from the study. After the pilot test, each question was examined for its clarity and relatedness to the purpose of the research, which resulted in some modifications in the questions.

Analysis of Data

After the completed questionnaires were received, the responses were scored and transferred onto the Virginia Tech mainframe computer system for analysis using the SAS statistical package. Body-cathexis and importance of meeting the ideal body image items were scored from one to seven, and a higher score reflects a higher degree of satisfaction or of

importance, respectively. The items for all other variables, clothing benefits sought, clothing attitude, and clothing behavior, were scored from one to five, and a higher score reflects a higher degree of agreement.

The parts of the instrument measuring clothing benefits sought and clothing behavior were checked for reliability by calculating Cronbach alpha, a measure of internal consistency. A scale is considered to have good reliability if it has an alpha value greater than 0.60 (Schuessler, 1971). Also, means and standard deviations of the variables were determined as a preliminary analysis to provide better understanding of the variables. In addition, Pearson correlation coefficients were calculated for the relationships between body-cathexis and importance of meeting the ideal body image variables. Before testing the hypotheses regarding the influence of body-cathexis and importance of meeting the ideal body image variables on clothing benefits sought and clothing behavior, it is important to know if the independent variables are correlated. According to Pedazur (1982), multicollinearity is a threat to interpretation about the influence of independent variables on the dependent variable in multiple regression. That is, if independent variables are highly correlated, the influence of each of the independent variables on the dependent variable may be misinterpreted. The examination of the correlation matrix among independent variables may be the first and most obvious diagnostic tool for the multicollinearity problem. If two independent variables are nearly linearly dependent, the correlation between them will be close to 1 (Myers, 1990). However, there are no definite guidelines on the simple correlations, and multicollinearity involving

associations among more than two independent variables will not be exhibited by simple correlations.

The second diagnostic tool is the variance inflation factor (VIF), which represents the inflation that each regression coefficient experiences above the ideal, the ideal being a correlation matrix which is an identity matrix. The VIF for the i th regression coefficient is written: $VIF = 1/(1-R^2_i)$, where the coefficient of multiple determination of the regression is produced by regressing the variable x_i against the other independent variables. If this value is large, the i th independent variable has a strong linear association with the remaining independent variables. The VIF for each term in the model measures the combined effect of the dependencies among the independent variables on the variance of that term. If VIF becomes larger than 10, severe multicollinearity is indicated (Myers, 1990). The third diagnostic tool is the eigenvalues of the correlation matrix. If there are one or more near linear dependencies in the data, then one or more of the eigenvalues will be small. The strength of the linear dependency is indicated by the nearness to zero of the smallest eigenvalue. The number of eigenvalues near zero indicates the number of collinearities detected among the independent variables. Multicollinearity is often measured by the ratio of the largest to the smallest eigenvalue, which is called the condition number of the correlation matrix. A large condition number, defined as 1,000 or greater (Myers, 1990), indicates serious multicollinearity. In addition to the correlation matrix, VIF and eigenvalues were examined to determine collinearity among the independent variables in this study.

In the event of multicollinearity, the most preferable method (Myers, 1990) is to eliminate one or more independent variables. However, it should be noted that elimination of independent variables may bring specification errors (Pedazur, 1982). There might be no clear solutions when multicollinearity problems exist. In this study, in cases of highly correlated independent variables, in addition to multiple regression, the correlations between each independent variable and the dependent variable were measured. If the multicollinearity problem exists in the regression model, correlation coefficients or t-values alone may not clearly explain the effect of each of the independent variables on the dependent variable. As one of the solutions to deal with the multicollinearity problem, correlations between each independent variable and dependent variable were discussed for more meaningful explanation for the relationship between independent and dependent variables.

Hypotheses were tested using the Pearson correlation coefficient and multiple regression. For multiple regression, the rejection level was set at the 0.05 significance level. For the Pearson correlation coefficient, the rejection level was set at the 0.001 significance level. Three levels of alphas (0.05, 0.01, and 0.001) are presented.

H1: Influence of body-cathexis on clothing benefits sought

Multiple regression was used in separate analyses with each clothing benefit sought as the dependent variable. The independent variables in each analysis were the body-cathexis scores for those body areas indicated in the respective hypothesis. Also, Pearson correlation coefficient was calculated to investigate the relationships between each dependent variable

(each clothing benefit sought) and the independent variables (selected body-cathexis variables) when body-cathexis variables were correlated. Since correlations among independent variables may threaten the interpretation about the influence of each independent variable on the dependent variable, the correlation coefficients were provided as a supplement for the interpretation of the findings in multiple regression.

H2: Relationships of body-cathexis to clothing attitude and clothing behavior

Pearson correlation coefficient was used to test H2b-3, H2b-4, H2c-2, and H2c-3. All other parts of H2 were tested by multiple regression in separate analyses with clothing attitude and each clothing behavior variable as the dependent variables. The independent variables are the body-cathexis scores for selected body areas. Also, Pearson correlation coefficients were calculated to investigate the relationships between each dependent variable and the independent variables when there were correlations among the independent variables.

H3: Effects of importance of meeting the ideal body image and body-cathexis on clothing benefits sought

Multiple regression was used in separate analyses with each clothing benefit sought as the dependent variable. The independent variables are the body-cathexis scores for selected body areas and importance of meeting the ideal body image for the areas. Also, Pearson correlation coefficients were calculated to investigate the relationships between each dependent

variable and the independent variables when there were correlations among the independent variables.

H4: Effects of importance of meeting the ideal body image and body-cathexis on clothing attitude and clothing behavior

Multiple regression was used in separate analyses with clothing attitude and each clothing behavior variable as the dependent variables. The independent variables are the body-cathexis scores for selected body areas and importance of meeting the ideal body image for the areas. Also, Pearson correlation coefficients were calculated to investigate the relationships between each dependent variable and the independent variables when there were correlations among the independent variables.

CHAPTER V

RESULTS AND DISCUSSION

The purpose of this study was to determine 1) the effects of body-cathexis on clothing benefits sought and clothing behavior and 2) the effects of importance of meeting the ideal body image on clothing benefits sought and clothing behavior in female college students.

This chapter presents the description of the sample, reliability of parts of the instrument, and the results of statistical analyses and their implications in relation to the hypotheses. The comparisons of the results of this study with related studies are also discussed. The chapter also presents a post-hoc analysis which investigated the moderating effects of importance of meeting the ideal body image and clothing attitude on the relationship between body-cathexis and clothing behavior.

Description of Sample

The final sample used in this study consisted of 177 female college students aged from 18 to 25. The response rate was 42 percent. The respondents were students who took courses offered in the College of Human Resources at Virginia Tech. The data were collected during February and March 1996. The academic levels of the subjects are described by the following frequencies and percentages: freshman (61 students, 34% of the sample), sophomore (39 students, 22% of the sample), junior (35 students, 20% of the sample), and senior (42 students, 24 % of the sample).

Instrument Reliability

Cronbach alpha coefficients were computed to test reliability. The coefficients shown in Table 2 indicate good reliability of the majority of the variables. The scales had alpha values from 0.72 to 0.88, except clothing preference for color ($\alpha = 0.54$).

Table 2: Cronbach alpha coefficients

Scales	Alpha
Clothing benefits sought	
Fashion image	0.85
Figure flaws compensation	0.75
Sex appeal	0.80
Self-improvement	0.79
Individuality	0.73
Clothing attitude	0.75
Clothing preference for fit (tight)	0.72
Clothing preference for color (dark)	0.54
Satisfaction with variety of ready-to-wear	0.80
Fashion innovativeness	0.78
In-store shopping interest	0.84
Catalog shopping	0.88

Results of Measured Variables

Mean values and standard deviations of variables are reported in Table 3. As shown in Table 3, the mean score for importance of meeting the ideal body image is higher than for body-cathexis, for four body areas. The greatest difference is between body-cathexis for

Table 3: Means and standard deviation of variables

Variables	Mean	SD
Body-cathexis		
Head/upper body	5.04	1.09
Lower body	4.41	1.16
Height	4.73	1.41
Weight	3.69	1.37
Torso	4.63	1.14
Importance of meeting the ideal body image		
Head/upper body	5.25	1.06
Lower body	4.77	1.04
Height	5.02	1.39
Weight	5.80	0.93
Torso	4.59	1.05
Clothing benefits sought		
Fashion image	3.72	0.71
Figure flaws compensation	3.67	0.75
Sex appeal	3.57	0.76
Self-improvement	3.57	0.79
Individuality	3.27	0.69
Clothing attitude	3.93	0.53
Clothing preference		
Fit (tight)	2.57	0.81
Color (dark)	3.46	0.79
Formal styles	3.39	0.97
Sexy styles	3.00	0.92
Dramatic styles	2.95	0.90
Waist emphasis	2.71	1.03
Bust emphasis	2.72	1.01
Neck emphasis	2.71	0.78
Legs emphasis	3.01	0.96
Hips emphasis	2.28	0.87
Satisfaction with ready-to-wear		
Pant length	2.99	1.11
Fit at thighs	2.80	1.01
Fit at hips	2.70	1.04
Fit at waist	2.87	1.05
Fit at bust	3.11	0.96
Fit at neckline	3.38	0.86
Variety	3.15	0.85
Fashion innovativeness	3.70	0.74
In-store shopping interest	3.97	0.79
Catalog shopping	2.84	0.91

weight and importance of meeting the ideal body image for weight. That is, the subjects considered meeting the ideal body image for weight to be important, but they were only moderately satisfied with the weight area of their bodies. In regard to satisfaction with the fit of ready-to-wear clothing, the subjects are generally more satisfied with the fit at bust and neck than at thighs, hips, and waist in ready-to-wear clothing. This finding has a managerial implication for apparel manufacturers by showing that the weight area is seen as a problem with the fit in ready-to-wear clothing. The possible reason behind the finding will be discussed later in testing the hypothesis about body-cathexis and satisfaction with ready-to-wear. In addition, compared to in-store shopping interest, the mean score for catalog shopping is relatively low; on average, the female college students in the sample demonstrated a higher degree of liking and enjoying in-store shopping for clothing than willingness to buy clothes by catalog.

In addition to means and standard deviations, correlations among the independent variables were calculated. Before testing the hypotheses regarding the influence of the body-cathexis and importance of meeting the ideal body image variables on clothing benefits sought and clothing behavior, it is important to know if the independent variables are correlated. According to Pedazur (1982), multicollinearity is a threat to interpretation about the influence of independent variables on the dependent variable in multiple regression. That is, if the independent variables are correlated, the influence of each independent variable on the dependent variable may not be truly reflected in the obtained coefficients. In case of highly correlated independent variables, in addition to multiple regression, it is important to

investigate the correlations between each independent and the dependent variables separately for better explanation.

Pearson correlation coefficients are given in Table 4 and Table 5; the correlations among the body-cathexis variables are in Table 4a, the correlations among the importance of meeting the ideal body image variables are in Table 4b, and the correlations between body-cathexis and importance of meeting the ideal body image are in Table 5. The results show that the body-cathexis variables are correlated (Table 4a), and that the importance of meeting the ideal body image variables are correlated (Table 4b). These significant correlations were considered in interpreting the multiple regression results in hypothesis testing, but no changes were made in the regression analysis as a result of the correlations. Table 5 shows that the correlations between body-cathexis and importance of meeting the ideal body image are not significant, except for the significant negative correlation between body-cathexis for weight and importance of meeting the ideal body image for weight and the significant positive correlation between body-cathexis for weight and importance of meeting the ideal body image for torso. The overall lack of significant correlations is consistent with Salem's (1990) conclusion that there was no relationship between body satisfaction and importance of meeting the ideal body image.

Table 4: Pearson correlation coefficients among the body-area variables

Pearson correlation coefficients among body-cathexis variables (Table 4a)

	BCU	BCL	BCH	BCW	BCT
BCU	--	0.53*	0.61*	0.40*	0.59*
BCL	--	--	0.56*	0.62*	0.60*
BCH	--	--	--	0.55*	0.50*
BCW	--	--	--	--	0.58*

Pearson correlation coefficients among importance of meeting the ideal body image variables (Table 4b)

	IMU	IML	IMH	IMW	IMT
IMU	--	0.71*	0.63*	0.74*	0.58*
IML	--	--	0.62*	0.66*	0.74*
IMH	--	--	--	0.53*	0.55*
IMW	--	--	--	--	0.42*

Note. * $p < 0.05$

BCU: body-cathexis for head/upper body

BCL: body-cathexis for lower body

BCH: body-cathexis for height

BCW: body-cathexis for weight

BCT: body-cathexis for torso

IMU: importance of meeting the ideal body image for head/upper body

IML: importance of meeting the ideal body image for lower body

IMH: importance of meeting the ideal body image for height

IMW: importance of meeting the ideal body image for weight

IMT: importance of meeting the ideal body image for torso

Table 5: Pearson correlation coefficients between body-cathexis and importance of meeting the ideal body image

	BCU	BCL	BCH	BCW	BCT
IMU	0.11	-0.09	0.03	-0.04	-0.12
IML	0.02	-0.04	0.02	0.05	-0.07
IMH	0.03	-0.06	-0.02	0.03	-0.14
IMW	0.13	-0.10	-0.01	-0.23*	-0.11
IMT	-0.13	0.06	-0.00	0.19*	-0.03

Note. *p< 0.05
BCU: body-cathexis for head/upper body
BCL: body-cathexis for lower body
BCH: body-cathexis for height
BCW: body-cathexis for weight
BCT: body-cathexis for torso
IMU: importance of meeting the ideal body image for head/upper body
IML: importance of meeting the ideal body image for lower body
IMH: importance of meeting the ideal body image for height
IMW: importance of meeting the ideal body image for weight
IMT: importance of meeting the ideal body image for torso

Results of Hypothesis Testing

Hypothesis 1 deals with the influence of body-cathexis on clothing benefits sought (fashion image, figure flaws compensation, sex appeal, self-improvement, and individuality). Multiple regression was used in separate analyses with each clothing benefit sought as the dependent variable. The independent variables were the body-cathexis scores for

selected areas of body parts. Pearson correlation coefficients also were calculated to investigate the relationships between each dependent variable (each clothing benefit sought) and the independent variables (selected body-cathexis variables).

Multicollinearity diagnostics for H1: As shown in Table 4a, body-cathexis variables were correlated. To examine multicollinearity among the body-cathexis variables, VIF and eigenvalues were examined (see Table 44 in Appendix D). The variance inflation for each independent variable was less than 10, which is the standard comparison score. Multicollinearity was also examined by the ratio of the largest to the smallest eigenvalue, which is called the condition number of the correlation matrix. The condition number was 390.63, which is less than the standard comparison score of 1,000. Therefore, the collinearity problem does not appear serious in the regression models in Hypothesis 1.

H1a: Fashion image is a direct function of the body-cathexis scores for the head/upper body, lower body, height, weight, and torso.

F-value, t-values, and Pearson correlation coefficients for the relationships between fashion image and body-cathexis are presented in Table 6. T-values and correlation coefficients (r) show that body-cathexis for head/upper body was a significant predictor of seeking fashion image through clothing. As we can see that head/upper body is the only variable which is related to the pursuit of fashion image in clothing in the results for Pearson correlation coefficient (Table 6), the close relationship among the independent variables (body-cathexis variables) was not a threat to interpretation of the results of the

Table 6: F-value, t-values, and Pearson correlation coefficients (r) for the relationship between fashion image and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	0.25*** 0.06 0.07 0.06 0.03
intercept	11.79***	0.000	
head/upper body	4.03***	0.416	
lower body	-0.10	-0.012	
height	-1.27	-0.131	
weight	0.83	0.093	
torso	1.79	-0.200	
F (5, 171) = 3.50** R ² = 0.09 Adj R ² = 0.06			

Note. *** $p < 0.001$

multiple regression analysis in H1a. Both multiple regression and Pearson correlation coefficients show that head/upper body satisfaction is the only one of the body-cathexis independent variables which significantly influences fashion image. This may imply that satisfaction with all areas of body parts do not explain the subjects' fashion image benefit sought through clothing; satisfaction with specific body parts (e.g., head/upper body) can partially explain the fashion image benefit sought.

Self-congruity theory and socialization theory may explain the finding. The individual is likely to experience self-congruity with ideal body image. Experiencing positive self-congruity with ideal body image makes the individual satisfied with her body

image, which enhances self-esteem. Ideal body image is likely to be associated with the body image of fashion models. All five body areas may be important in maintaining fashion image. However, among the body areas, head/upper body may be the most prominent and important area; the area may be most frequently and easily noticed. Therefore, the more a person is satisfied with her head/upper body, the more likely that she will seek to maintain a fashionable image through clothing. H1a is partially supported.

H1b: Figure flaws compensation is an inverse function of the body-cathexis scores for the lower body, height, weight, and torso.

F-value, t-values, and Pearson correlation coefficients for the relationships between figure flaws compensation and body-cathexis are presented in Table 7. The regression model has 0.29 as R^2 and 14.28 as F-value. Thus, the independent variables explain 29% of the variance in the figure flaws compensation benefit sought from clothing, and the model significantly predicts this benefit sought. T-values show that the two significant body-cathexis variables for weight and torso are inversely related to figure flaws compensation. That is, less satisfaction with the weight and torso area is associated with the pursuit of figure flaws compensation through clothing. Symbolic self-completion may explain the finding about figure flaws compensation because dissatisfaction with body image may provide a sense of incompleteness. Kwon and Parham (1994) showed a negative relationship between weight satisfaction and clothing camouflage function.

Table 7: F-value, t-values, and Pearson correlation coefficients (r) for the relationship between figure flaws compensation and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	17.46***	0.000	
lower body	1.05	0.116	-0.31***
height	-0.83	-0.075	-0.23**
weight	-5.18***	-0.506	-0.49***
torso	-2.48*	-0.244	-0.32***
F (4, 172) = 14.28*** R ² = 0.29 Adj R ² = 0.27			

Note. *** $p < 0.001$, ** $p < 0.01$, and * $p < 0.05$

In addition to the t-values, Pearson correlation coefficients were calculated to see if satisfaction with the other areas of body parts are related to figure flaws compensation (Table 7). The coefficients show that body-cathexis for three areas are significantly related to figure flaws compensation. That is, in addition to weight and torso areas, satisfaction with lower body is negatively related to figure flaws compensation. Since the independent variables (body-cathexis for the three areas) are correlated (Table 4a) and since weight and torso areas have relatively higher correlations with figure flaws compensation than lower body area (Table 7), only weight and torso areas appear to be significant predictors in the regression analysis. When the independent variables are correlated, the effect size of the independent variable (body-cathexis for lower body)

which has a slightly lower correlation with a dependent variable ($r=-0.31$) than does other independent variable ($r=-0.32$ for torso), appears to be much smaller (standardized regression coefficient = 0.116 for lower body) than does the other independent variable (standard regression coefficient = 0.244 for torso). The effect of body-cathexis for lower body on figure flaws compensation appears more than two times weaker than does that of body-cathexis for torso, even though the correlations are not much different. Among the body areas, satisfaction with weight area is the most significant predictor of the figure compensation through clothing (standardized regression coefficient = -0.506). The finding supports H1b.

H1c: Sex appeal is a direct function of the body-cathexis scores for the head/upper body, lower body, height, weight, and torso.

F-value, t-values, and Pearson correlation coefficients for the relationships between sex appeal and body-cathexis are presented in Table 8. T-values show that body-cathexis for head/upper body was a significant indicator of seeking sex appeal benefit through clothing. This may imply that satisfaction with all areas of body parts do not explain the subjects' sex appeal benefit sought through clothing; satisfaction with specific body parts (e.g., head/upper body) can partially explain the sex appeal benefit sought. The finding partially supports H1c. Self-congruity theory and socialization theory may explain the finding, with a similar fashion which was used in H1a.

Table 8: F-value, t-values, and Pearson correlation coefficients (r) for the relationship between sex appeal and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	11.16***	0.000	0.20**
head/upper body	3.95***	0.408	
lower body	-1.53	-0.191	
height	-1.76	-0.181	
weight	1.15	0.128	
torso	-0.69	-0.078	
F (5, 171) = 3.38** R ² = 0.09 Adj R ² = 0.06			

Note. *** p<0.001, ** p<0.01, and * p<0.05

H1d: Self-improvement is a direct function of the body-cathexis scores for the head/upper body, lower body, height, weight, and torso.

F-value, t-values, and Pearson correlation coefficients for the relationships between self-improvement and body-cathexis are presented in Table 9. T-values show that body-cathexis for head/upper body and torso were predictors of seeking self-improvement. That is, the more satisfaction with head/upper body, the more use of clothing as a means to maintain self-esteem. Also, the subjects who were less satisfied with torso area had more tendency to use clothing as a means to enhance their self-esteem. In Hwang’s (1993) study, four areas of body-cathexis (head/upper body, lower body, weight, and torso) were important factors in the older women subjects’ self-esteem. This

study partially supports Hwang's study in that body-cathexis for head/upper body and torso are predictors of self-improvement benefit sought in clothing for the sample of female college students. However, body-cathexis for lower body, height, and weight are not significant predictors of self-improvement benefit sought in clothing. H1d is partially supported. In addition, Pearson correlation coefficients were calculated for the relationship between self-improvement and body-cathexis. Table 9 shows that the correlations between self-improvement and body-cathexis variables are not significant.

Table 9: F-value, t-values, and Pearson correlation coefficients (r) for the relationship between self-improvement and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	12.23 ^{***}	0.000	
head/upper body	3.66 ^{**}	0.377	0.10
lower body	-0.72	-0.089	-0.12
height	-1.59	-0.163	-0.08
weight	0.15	0.017	-0.11
torso	-2.01 [*]	-0.225	-0.14
F (5, 171) = 3.50 ^{**}			
R ² = 0.10			
Adj R ² = 0.07			

Note. *** p<0.001, ** p< 0.01, and * p<0.05

H1e: Individuality is a direct function of the body-cathexis scores for the head/upper body, lower body, height, weight, and torso.

F-value, t-values, and Pearson correlation coefficients for the relationships between individuality and body-cathexis are presented in Table 10. T-values and Pearson correlation coefficient show that the body-cathexis score for weight is a significant predictor of seeking individuality benefit through clothing. Consumers' need for uniqueness, as noted in motivation theory, may explain the finding about individuality. Self-confidence may motivate people to pursue individuality and distinctiveness (Schiffman & Kanuk, 1994). Weight satisfaction could be an important factor in individuals' self-confidence and then serves as a motive to seek individuality in clothing. Kwon and Parham (1994) showed that seeking individuality is positively related to weight satisfaction.

Table 10: F-value, t-values, and Pearson correlation coefficients for the relationship between individuality and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	10.24***	0.000	
head/upper body	1.85	0.191	0.18*
lower body	1.05	0.132	0.22**
height	-1.56	-0.161	0.09
weight	2.25*	0.249	0.25***
torso	-1.25	-0.141	0.13
F (5, 171) = 3.48** R ² = 0.09 Adj R ² = 0.07			

Note. *** p<0.001, ** p< 0.01, and * p< 0.05

Hypothesis 2 deals with relationships of body-cathexis to clothing attitude and clothing behavior. Pearson correlation coefficient was used to test H2b-3, H2b-4, H2c-2, and H2c-3. All other parts of H2 were tested by multiple regression in separate analyses with clothing attitude and each clothing behavior variable as the dependent variable. The independent variables are the body-cathexis scores for selected areas of body parts. Also, Pearson correlation coefficient was calculated to investigate the relationships between each dependent variable and independent variables.

H2a: Clothing attitude is a direct function of the body-cathexis scores for the head/upper body, lower body, height, torso, and weight.

Multicollinearity diagnostics for H2a: As shown in Table 4a, the body-cathexis variables were correlated. To examine multicollinearity among the body-cathexis variables, VIF and eigenvalues were examined (see Table 44 in Appendix D). The variance inflation for each independent variable was less than 10, which is the standard score for comparison. Multicollinearity was also examined by the ratio of the largest to the smallest eigenvalue, which is called the condition number of the correlation matrix. The condition number was 390.63, which is less than the standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H2a.

F-value, t-values, and Pearson correlation coefficients for the relationships between clothing attitude and body-cathexis are presented in Table 11. T-values and Pearson correlation coefficient show that the body-cathexis score for head/upper body was a significant predictor of clothing attitude. That is, the more satisfied with head/upper body, the more favorable the attitude toward clothing. The multi-attribute attitude model may explain the relationship between head/upper body satisfaction and clothing attitude (H3a). Clothing attitude is a function of head/upper body image and of the evaluation of head/upper body image. If a person is satisfied with her head/upper body, she may have a favorable attitude toward clothing. Hwang (1993) showed that clothing attitude is positively related to the body-cathexis scores for the head/upper body, lower body, and weight of women subjects aged 55 years and older.

Table 11: F-value, t-values, and Pearson correlation coefficients for the relationship between clothing attitude and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	16.44***	0.000	0.34*** 0.13 0.12 0.09 0.15*
head/upper body	4.56***	0.459	
lower body	0.18	0.014	
height	-1.41	-0.141	
weight	0.17	0.018	
torso	-0.72	-0.079	
F (5, 171) = 5.18** R ² = 0.13 Adj R ² = 0.11			

Note. *** p<0.001 and * p<0.05

The finding of the study may imply that satisfaction with all areas of body parts do not explain clothing attitude; satisfaction with specific body area (e.g., head/upper body) can partially explain clothing attitude. Thus, the relationship between body-cathexis and clothing attitude may be uni-dimensional for head/upper body area only. However, most previous studies (e.g., Damhorst & Littrell, 1984; Davis, 1985; Shim et al., 1991) did not concern body-cathexis for specific body areas when investigating the relationship between body-cathexis and clothing attitude. Using body-cathexis for the whole body area together only may result in the conflicting findings in the previous studies.

Kaiser (1990) suggested that the relationship between body satisfaction and clothing attitude/clothing interest may not be uni-dimensional and that more research is needed to clarify these relationships, based on the research of Davis (1985). Shim, Kotsiopulos, and Knoll (1991) investigated the interaction of body-cathexis and clothing attitude in the male apparel market, and they grouped their subjects according to clothing attitude and body-cathexis scores. The groups were hypothesized to differ in clothing behavior, shopping behavior, and individual characteristics. Shim et al. suggested that the relationship between body-cathexis and clothing attitude may not be uni-dimensional because the groups categorized by interactions between body-cathexis and clothing attitude differed in clothing and shopping behavior. However, the relationship between body-cathexis and clothing attitude in their study does not seem to be clear because they did not measure the correlation between body-cathexis and clothing attitude.

H3b-1: Clothing preference for sexy styles is a direct function of the body-cathexis scores for the head/upper body, lower body, height, weight, and torso.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 44 in Appendix D). The variance inflation for each independent variable was less than 10, which is the standard score for comparison. The condition number was 390.63, which is less than the standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H2b-1.

F-value, t-values, and Pearson correlation coefficients for the relationships between clothing preference for sexy styles and body-cathexis are presented in Table 12.

Table 12: F-value, t-values, and Pearson correlation coefficients for the relationship between clothing preference for sexy styles and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	6.65***	0.000	
head/upper body	1.87	0.195	0.16*
lower body	-1.78	-0.226	0.07
height	-0.70	-0.073	0.09
weight	2.10*	0.233	0.18**
torso	0.75	0.085	0.15*
F (5, 171) = 2.26*			
R ² = 0.06			
Adj R ² = 0.03			

Note. *** p<0.001, ** p<0.01, and * p<0.05

T-values show that the body-cathexis score for weight was a significant predictor of clothing preference for sexy styles. The theory of reasoned action model may explain the relationship between weight area satisfaction and clothing preference for sexy styles. Clothing preference for sexy styles is determined by attitude toward preferring sexy styles. The attitude is a function of body image which is related to sexy styles and of the evaluation of the body image. Weight area (e.g., waist, hip) is an important part in sexy style clothing. The more satisfied one is with weight area, the more she will prefer sexy style clothing. H2b-1 is partially supported.

H2b-2: Clothing preference for leg emphasis is a direct function of the body-cathexis scores for the lower body and height.

Multicollinearity diagnostics: As shown in Table 4a, the body-cathexis variables were correlated. To examine multicollinearity among the body-cathexis variables, VIF and eigenvalues were examined (see Table 45 in Appendix D). The variance inflation is 1.46 for both independent variables. The condition number is 100.35, which is less than the standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H2b-2.

F-value, t-values, and Pearson correlation coefficients for the relationships between clothing preference for leg emphasis and body-cathexis are presented in Table 13. The regression model has $R^2 = 0.31$ and F-value = 38.62. Thus, the independent variables explain 31% of the variance in clothing preference for leg emphasis, and the

model significantly predicts the clothing preference. T-values show that body-cathexis for lower body was a significant predictor of clothing preference for leg emphasis. The more satisfied with lower body area, the stronger the preference for leg emphasis. The theory of reasoned action may explain the finding. Clothing preference for leg emphasis is determined by attitude toward preferring the leg emphasis. The attitude is a function of body image for lower body and of the evaluation of the body image. The more one positively evaluates lower body, the more she will prefer clothing which emphasizes legs (lower body).

In addition to the t-values, Pearson correlation coefficients were calculated to see if satisfaction with the other body areas are related to clothing preference for leg emphasis (Table 13). The coefficients show that body-cathexis for height is also related to clothing preference for leg emphasis. Since the two independent variables are correlated (Table 4a) and since lower body area has a relatively higher correlation with clothing preference for

Table 13: F-value, t-values, and Pearson correlation coefficients for the relationship between clothing preference for leg emphasis and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	3.42**	0.000	0.55*** 0.38***
lower body	6.47***	0.493	
height	1.29	0.098	
F (2, 174) = 38.62*** R ² = 0.31 Adj R ² = 0.30			

Note. *** p<0.001 and ** p<0.01

leg emphasis than does height area (Table 13), only lower body area appears to be a significant predictor in the regression analysis. H2b-2 is supported.

H2b-3: Clothing preference for waist/hip emphasis is positively related to the body-cathexis score for weight.

Pearson correlation coefficients were calculated for the relationship of body-cathexis for weight to clothing preferences for waist and hip emphasis. The coefficients show significant relationships between body-cathexis for weight and clothing preference for waist emphasis ($r = 0.47^{***}$, $r^2 = 0.22$), and between body-cathexis for weight and clothing preference for hip emphasis ($r = 0.57^{***}$, $r^2 = 0.32$). The theory of reasoned action model may explain the finding. The more one positively evaluates her weight, the more likely that she will prefer clothing which emphasizes waist and hips (weight area). H2b-3 is supported.

H2b-4: Clothing preference for bust/neck emphasis is positively related to the body-cathexis score for torso.

Pearson correlation coefficients were calculated for the relationship of body-cathexis for torso to clothing preferences for bust and neck emphasis. The coefficient shows that the relationship between body-cathexis for torso and clothing preference for neck emphasis ($r = 0.24^{**}$, $r^2 = 0.06$) is not significant at the 0.001 significance level.

Also, body-cathexis for torso and clothing preference for bust emphasis is not significantly related ($r = 0.11$). H2b-4 is not supported.

H2b-5: Clothing preference for tight fit is a direct function of the body-cathexis scores for the weight and torso.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 46 in Appendix D). The variance inflation score is 1.53 for both independent variables. The condition number is 119.88, which is less than the standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H2b-5.

F-value, t-values, and Pearson correlation coefficients for the relationships between clothing preference for tight fit and body-cathexis are presented in Table 14. The R^2 is 0.27 and the F-value is 32.48. Thus, the independent variables explain 27% of the variance in clothing preference for tight fit, and the model significantly predicts the clothing preference. T-values show that body-cathexis for weight was a significant predictor of clothing preference for tight fit. The theory of reasoned action may explain the finding. The attitude toward preferring the tight fit is a function of body image for weight and of the evaluation of the body image. The tightness of fit in clothing is generally determined by garments' dimensional ease for weight-related area. The more one is satisfied with weight, the more she will prefer tight fit clothing.

In addition to the t-values, Pearson correlation coefficients were calculated to see if satisfaction with the other body areas are related to clothing preference for tight fit

(Table 14). The coefficients show that body-cathexis for torso is also related to clothing preference for tight fit. Since the two independent variables are correlated (Table 4a) and since weight area has a relatively higher correlation with clothing preference for tight fit than does torso area (Table 14), only satisfaction with weight area appears to be a significant predictor in the regression analysis. Although two areas of body parts are related to clothing preference for tight fit, body-cathexis for weight is more significant predictor in clothing preference for tight fit (standard regression coefficient = 0.48). H2b-5 is supported.

Table 14: F-value, t-values, and Pearson correlation coefficients for the relationship between clothing preference for tight fit and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	6.01***	0.000	0.52*** 0.35***
weight	6.01***	0.480	
torso	0.82	0.065	
F (2, 174) = 32.48*** R ² = 0.27 Adj R ² = 0.26			

Note. *** p<0.001

H3b-6: Clothing preference for bright colors is positively related to the body-cathexis score for weight.

Pearson correlation coefficient was calculated for the relationship between body-cathexis for weight and clothing preference for dark colors. The coefficient shows a significant negative relationship between the two variables ($r = -0.46^{***}$, $r^2 = 0.21$). Thus, there was a positive relationship between body-cathexis for weight and clothing preference for bright colors. The theory of reasoned action model may explain the finding. Clothing preference for certain styles is determined by attitude toward preferring certain styles. This attitude is a function of body image which is related to those clothing styles and of the evaluation of the body image. Clothing preference for bright colors is related to body image for weight area. Bright colors can make objects stand out visually, and can make the objects look larger than dark colors. The more satisfied one is with weight, the more she will prefer bright colored clothing.

H2c-1: Satisfaction with pant length in ready-to-wear is a direct function of the body-cathexis scores for the lower body and height.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 45 in Appendix D). The variance inflation is 1.46 for both independent variables. The condition number is 100.35, which is less than the standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H2c-1.

F-value, t-values, and Pearson correlation coefficients for the relationships between satisfaction with pant length in ready-to-wear and body-cathexis are presented in Table 15. The R^2 is 0.20, and the F-value is 21.61. Thus, the independent variables

explain 20% of the variance in satisfaction with pant length in ready-to-wear clothing, and the model significantly predicts the satisfaction with ready-to-wear clothing. T-values show that body-cathexis for height was a significant predictor of satisfaction with pant length in ready-to-wear clothing. The more satisfied with height area, the more satisfied with pant length in ready-to-wear.

Table 15: F-value, t-values, and Pearson correlation coefficients for the relationship between satisfaction with pant length in ready-to-wear and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	3.95***	0.000	0.28*** 0.44***
lower body	0.51	0.042	
height	5.13***	0.421	
F (2, 174) = 21.61*** R ² = 0.20 Adj R ² = 0.19			

Note. *** p<0.001

Symbolic interaction theory and social comparison theory may provide an explanation for the finding. When people are trying ready-to-wear clothing, the comparison of their body image to the current ideal body image reflected in ready-to-wear clothing may be inevitable. Pant length in ready-to-wear clothing is related to height. If individuals are satisfied with their height area, they may respond to pant length in ready-to-wear clothing with satisfaction. LaBat (1988) reported that higher body-cathexis was

associated with more satisfaction with the physical fit of ready-to-wear clothing among female consumers.

In addition to the t-values, Pearson correlation coefficients show that body-cathexis for lower body is also related to satisfaction with pant length in ready-to-wear. Since the two independent variables are correlated (Table 4a) and since height area has a relatively higher correlation with satisfaction with pant length than does lower body area (Table 15), only height area appears to be a significant predictor in the regression analysis. H2c-1 is supported.

H2c-2: Satisfaction with the fit at thighs/hips/waist is positively related to the body-cathexis score for weight.

Pearson correlation coefficients in Table 16 show the significant relationships of body-cathexis score for weight to satisfaction with the fit at thighs/hips/waist in ready-to-wear and support H2c-2. In regard to the contribution of body-cathexis for weight, it explains 29% of the variance in the satisfaction with the fit at thighs, 32% for the satisfaction with the fit at hips, and 21% for the satisfaction with the fit at waist.

Symbolic interaction theory and social comparison theory may provide an explanation for the finding. When people are trying ready-to-wear clothing, the comparison of their body image to the current ideal body image reflected in ready-to-wear clothing may be inevitable. If individuals are satisfied with their bodies, they may respond to ready-to-wear clothing with satisfaction. The fit at thighs/hips/waist is related to

weight area of body. If one is satisfied with the weight area of her body, she may be satisfied with fit at thighs/hips/waist in ready-to-wear. However, if one is not satisfied with the weight area, she will be dissatisfied with the fit at those areas in clothing as a result of comparison with ideal standard weight which is incorporated in thighs/hips/waist areas in ready-to-wear clothing. LaBat and DeLong (1990) reported a significant positive relationship between body-cathexis and satisfaction with fit of apparel, especially for satisfaction with apparel fit on lower parts (e.g., waist, thighs) of the body. Hwang (1993) reported significant positive correlations between body-cathexis for weight and satisfaction with ready-to-wear for women aged 55 years and older.

Table 16: Pearson correlation coefficients for relationships of body-cathexis for weight to satisfaction with the fit at thighs/hips/waist

	Body-cathexis for weight
satisfaction with the fit at thighs	0.54*** (0.29)
satisfaction with the fit at hips	0.57*** (0.32)
satisfaction with the fit at waist	0.46*** (0.21)

Note. () = variance, r^2
 *** $p<0.001$

H2c-3: Satisfaction with the fit at bust and neckline is positively related to the body-cathexis score for torso.

Pearson correlation coefficients in Table 17 show the significant relationships of body-cathexis for torso to satisfaction with the fit at bust and neckline in ready-to- wear, and thus supporting H2c-3. In regard to the contribution of body-cathexis for torso, it explains 27% of the variance in satisfaction with the fit at bust and 23% for satisfaction with the fit at neckline. Symbolic interaction theory and social comparison theory may provide an explanation for the finding. When people are trying ready-to-wear clothing, the comparison of their body image to the current ideal body image, as reflected in the clothing, may be inevitable. If individuals are satisfied with their body areas, they may respond to ready-to-wear clothing with satisfaction. The fit at bust and neckline is related to the torso area of the body. The more one is satisfied with her torso area, the more she may be satisfied with fit at bust and neckline in ready-to-wear.

Table 17: Pearson correlation coefficients for relationships of body-cathexis for torso to satisfaction with the fit at bust and neckline

	Body-cathexis for torso
satisfaction with the fit at bust	0.53*** (0.27)
satisfaction with the fit at neckline	0.48*** (0.23)

Note. () = variance, r^2

*** $p < 0.001$

H2c-4: Satisfaction with the variety in ready-to-wear is a direct function of the body-cathexis scores for height and weight.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 47 in Appendix D). The variance inflation is 1.44 for both independent variables. The condition number is 76.91, which is less than the standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H2c-4.

F-value, t-values, and Pearson correlation coefficients for the relationships between satisfaction with the variety in ready-to-wear and body-cathexis are presented in Table 18. The regression model has 0.23 as R^2 and 25.46 as F-value. Thus, the independent variables explain 23% of the variance in satisfaction with the variety in ready-to-wear clothing, and the model significantly predicts the satisfaction with the variety in ready-to-wear. T-values and Pearson correlation coefficients show that body-cathexis for height and weight are significant predictors of satisfaction with the variety in ready-to-wear clothing, supporting H2c-4.

Symbolic interaction theory and social comparison theory may provide an explanation for the finding. When people are trying ready-to-wear clothing, the comparison of their body image to the current ideal body image reflected in the clothing may be inevitable. Current ideal standards are reflected in the sizing systems and styles of ready-to-wear clothing. The sizing and style of ready-to-wear are related to the height and weight areas of the body. The more one is satisfied with height and weight areas, the more she may be satisfied with the variety of ready-to-wear.

Table 18: F-value, t-values, and Pearson correlation coefficients for the relationship between satisfaction with the variety in ready-to-wear and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	0.38*** 0.45***
intercept	8.78***	0.000	
height	2.35*	0.188	
weight	4.32***	0.345	
F (2, 174) = 25.44*** R ² = 0.23 Adj R ² = 0.22			

Note. *** p<0.001 and * p< 0.05

H2d-1: In-store shopping interest is a direct function of the body-cathexis scores for head/upper body, lower body, height, weight, and torso.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 44 in Appendix D). The variance inflation for each independent variable was less than 10, which is the standard score for comparison. The condition number was 390.63, which is less than the standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H2d-1.

F-value, t-values, and Pearson correlation coefficients for the relationships between in-store shopping interest and body-cathexis are presented in Table 19. T-values and Pearson correlation coefficient show that body-cathexis for head/upper body is the only significant predictor of in-store shopping interest. The significance of body-cathexis

for head/upper body may be explained by the theory of reasoned action. In-store shopping behavior is determined by attitude toward in-store shopping. This attitude is a function of attributes related to in-store shopping and of the evaluation of the attributes (attitude = $\sum b_i e_i$). The results suggest that, in H2d-1, attitude toward in-store shopping is a function of head/upper body image (b_i) and evaluation of head/upper body image (e_i). If a person is satisfied with her head/upper body, she may have a favorable attitude toward in-store shopping. The finding partially supports H2d-1. Hwang (1993) showed that in-store shopping interest is positively related to the body-cathexis scores for head/upper body, height, and weight for women aged 55 years and older.

Table 19: F-value, t-values, and Pearson correlation coefficients for the relationship between in-store shopping interest and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	9.89***	0.000	0.34*** 0.15* 0.22** 0.16* 0.16*
head/upper body	3.82**	0.386	
lower body	-0.78	-0.096	
height	0.10	0.009	
weight	1.01	0.109	
torso	-0.64	-0.070	
F (5, 171) = 4.99** R ² = 0.13 Adj R ² = 0.10			

Note. *** p<0.001, ** p< 0.01, and * p< 0.05

H2d-2: Catalog shopping is a function of the body-cathexis scores for head/upper body, lower body, height, weight, and torso.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 44 in Appendix D). The variance inflation for each independent variable was less than 10, which is the standard score for comparison. The condition number was 390.63, which is less than the standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H2d-2.

F-value, t-values, and Pearson correlation coefficients for the relationships between catalog shopping and body-cathexis are presented in Table 20. T-values show that body-cathexis for head/upper body and torso are significant predictors of catalog shopping. That is, the more the subject is satisfied with her head/upper body, the less likely that she will use catalog shopping. However, the more the subject is satisfied with her torso, the more likely that she will use catalog shopping.

The finding may be explained by the theory of reasoned action. Catalog shopping behavior is determined by attitude toward catalog shopping. This attitude is a function of attributes related to catalog shopping and of the evaluation of the attributes ($\text{attitude} = \sum b_i e_i$). The results suggest that, in H2d-2, attitude toward catalog shopping is a function of head/upper body image (b_i) and evaluation of head/upper body image (e_i). People who are satisfied with their head/upper bodies may have a negative attitude toward catalog shopping because it may not provide various benefits when searching for proper clothes for maintaining their satisfaction with head/upper body image. However, people who are

satisfied with their torso may have a favorable attitude toward catalog shopping because it is a kind of shopping to provide clothes for their bodies. The finding has an implication in that catalog shopping may be influenced by satisfaction with different areas of body parts; head/upper body satisfaction affects catalog shopping negatively while torso satisfaction affects catalog shopping positively.

Table 20: F-value, t-values, and Pearson correlation coefficients for the relationship between catalog shopping and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	8.86***	0.000	
head/upper body	-3.46**	-0.353	-0.13
lower body	-0.38	-0.047	0.06
height	0.19	0.019	-0.02
weight	0.02	0.002	0.07
torso	3.58**	0.397	0.16*
F (5, 171) = 4.10**			
R ² = 0.11			
Adj R ² = 0.08			

Note. *** $p < 0.001$, ** $p < 0.01$, and * $p < 0.05$

H2e: Fashion innovativeness is a direct function of the body-cathexis scores for head/upper body, lower body, height, weight, and torso.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 44 in Appendix D). The variance inflation for each independent variable was less than 10, which is

the standard score for comparison. The condition number was 390.63, which is less than the standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H2e.

F-value, t-values, and Pearson correlation coefficients for the relationships between fashion innovativeness and body-cathexis are presented in Table 21. T-values and correlation coefficients (r) show that body-cathexis for head/upper body was the only significant predictor of fashion innovativeness. The theory of reasoned action and fashion process theory may provide an understanding for the finding. Fashion innovativeness is determined by attitude toward trying new fashions. This attitude is a function of attributes related to trying new fashions and of the evaluation of the attributes (attitude = $\sum b_i e_i$). The results suggest that, in H2e, attitude toward trying new fashions is a function of head/upper body image (b_i) and evaluation of head/upper body image (e_i). If a person is satisfied with her head/upper body, she may have a favorable attitude toward trying new fashions. Fashion process theory supports this idea. Fashion innovativeness requires some individuality and feeling of security (Kaiser, 1990). One's satisfaction with head/upper body may provide a feeling of security and individuality, which leads to fashion innovativeness.

However, body-cathexis for other body areas are not related to fashion innovativeness in this study. This may imply that satisfaction with all areas of body parts do not explain complex clothing behavior (e.g., fashion innovativeness); satisfaction with specific body areas (e.g., head/upper body) can partially explain fashion innovativeness.

Table 21: F-value, t-values, and Pearson correlation coefficients for the relationship between fashion innovativeness and body-cathexis

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	10.48***	0.000	
head/upper body	4.34***	0.442	0.29***
lower body	0.89	0.109	0.13
height	-1.68	-0.170	0.08
weight	0.11	0.012	0.07
torso	-1.65	-0.182	0.08
F (5, 171) = 4.48** R ² = 0.12 Adj R ² = 0.09			

Note. *** p<0.001

H2e is partially supported. To explain complex clothing behavior problems, another approach (e.g., investigation of the effect of importance of meeting the ideal body image on clothing behavior) may be needed. The results for testing the rest of the hypotheses will discuss this issue.

Hypothesis 3 deals with effects of importance of meeting the ideal body image (IMI) and body-cathexis on clothing benefits sought (fashion image, figure flaws compensation, sex appeal, self-improvement, and individuality). Multiple regression was used in separate analyses with each clothing benefit sought as the dependent variable. The independent variables are the body-cathexis scores for selected areas of body parts and importance of

meeting the ideal body image for the areas. Also, Pearson correlation coefficient was calculated to investigate the relationships between each dependent variable (each clothing benefit sought) and the independent variables (body-cathexis scores for selected areas and importance of meeting the ideal body image for the areas).

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 48 in Appendix D). The variance inflation for each independent variable was less than 10, which is the standard score for comparison. The condition number was 1930.47, which is higher than the standard comparison score of 1,000. Therefore, the collinearity problem exists in the regression models in H3. The collinearity is a threat to the interpretation regarding the effect of each independent variable. The interpretation of the results in multiple regression should be incorporated with the Pearson correlation coefficients for the dependent and independent variables.

H3a: Fashion image is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image for the five areas.

In H3a, importance of meeting the ideal body image (IMI) is added to the previous hypothesis regarding the relationship between fashion image and body-cathexis (H1a). F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and importance of meeting the ideal body image on fashion image are presented in Table 22. In the regression model, R^2 is 0.23, meaning that the independent variables explain 23% of

the variance in the fashion image sought from clothing. Comparison of R^2 in the regression model concerning body-cathexis only (Table 6) and in the regression model with body-cathexis and importance of meeting the ideal body image (Table 22) shows that inclusion of importance of meeting the ideal body image improves R^2 from 0.09 to 0.23. The test for the increment due to the variables on importance of meeting the ideal body image shows that F-value is 5.53*, which means that the increment in explained variance due to the variables on importance of meeting the ideal body image is statistically significant. Importance of meeting the ideal body image explains 13% of the variance in fashion image benefit sought ($0.22-0.09=0.13$). It implies that importance of meeting the ideal body image is an important predictor of the fashion image benefit sought through clothing. T-values in Table 22 show that the body-cathexis score for head/upper body and importance of meeting the ideal body image for weight are significant predictors of the fashion image benefit sought.

In addition to the t-values, Pearson correlation coefficients were calculated to see if importance of ideal body image for the other areas is related to fashion image (Table 22). The coefficients show that importance of meeting the ideal body image for four areas is significantly related to fashion image at the 0.001 significance level. Since the collinearity problem is serious in the regression model, only importance of meeting the ideal body image for weight area appears to be a significant predictor in the regression analysis. While body-cathexis for head/upper is only related to fashion image, importance

of meeting the ideal body image for four areas is related to fashion image. The finding supports H3a.

Table 22: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis and importance of meeting the ideal body image on fashion image

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	3.69**	0.000	0.25***
body-cathexis for head/upper body	2.14*	0.234	
body-cathexis for lower body	-0.32	-0.037	
body-cathexis for height	-1.26	-0.121	
body-cathexis for weight	1.71	0.205	
body-cathexis for torso	-0.70	-0.076	
importance of ideal, head/upper body	0.81	0.117	0.35***
importance of ideal, lower body	-1.27	-0.193	0.26***
importance of ideal, height	1.48	0.162	0.31***
importance of ideal, weight	2.90**	0.343	0.38***
importance of ideal, torso	-0.19	-0.021	0.14*
F (10, 166) = 4.91***			
R ² = 0.23			
Adj R ² = 0.18			

Note. *** p<0.001, ** p< 0.01, and * p< 0.05

When meeting the ideal body image is considered to be important, the individual is likely to doubt her body image; high IMI (importance of meeting the ideal body image) may threaten her self-evaluation and self-esteem. To resolve the tension state which is resulted from high IMI, the individual may seek benefits from clothing. As IMI becomes higher, the more likely that she will seek benefits from clothing to reach the ideal body

image and to enhance her self-esteem. Fashion image is one of the benefits from clothing, and ideal body image is likely to be associated with the body image of fashion models. Therefore, the more meeting the ideal body image important, the more she will seek fashion image benefit through clothing to enhance her self-image.

H3b: Figure flaws compensation is a function of the body-cathexis scores for four areas (lower body, height, weight, and torso) and importance of meeting the ideal body image for the four areas.

F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and importance of meeting the ideal body image on figure flaws compensation are presented in Table 23. In the regression model, R^2 is 0.38, meaning that the independent variables explain 38% of the variance in the figure flaws compensation benefit sought. Comparison of R^2 in the regression model concerning body-cathexis only (Table 7) and in the regression model with body-cathexis and importance of meeting the ideal body image (Table 23) shows that inclusion of importance of meeting the ideal body image improves R^2 from 0.29 to 0.38. The test for the increment due to the variables on importance of meeting the ideal body image variables shows that F-value is 4.82*, which means that the increment in explained variance due to the importance of meeting the ideal body image is statistically significant. It implies that importance of meeting the ideal body image is an important predictor in the figure flaws compensation benefit sought through clothing. T-values in Table 28 show that body-cathexis for weight and importance of meeting the ideal

body image for height are significant predictors of the figure flaws compensation benefit sought.

Table 23: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis and importance of meeting the ideal body image on figure flaws compensation

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	7.78***	0.000	
body-cathexis for lower body	1.03	0.110	-0.31***
body-cathexis for height	-0.74	-0.063	-0.23**
body-cathexis for weight	-4.49***	-0.485	-0.49***
body-cathexis for torso	-1.37	-0.134	-0.32***
importance of ideal, lower body	-1.09	-0.149	0.19***
importance of ideal, height	1.90**	0.186	0.27***
importance of ideal, weight	1.50	0.159	0.41***
importance of ideal, torso	0.28	0.028	0.05
F (10, 166) = 10.08***			
R ² = 0.38			
Adj R ² = 0.34			

Note. *** p<0.001 and ** p< 0.01

In addition to the t-values, Pearson correlation coefficients were calculated to see if importance of ideal body image for the other areas is related to figure flaws compensation (Table 23). The coefficients show that importance of meeting the ideal body image for height and weight areas are significantly related to figure flaws compensation. Since the collinearity exists in the regression model, only importance of meeting the ideal body image for height area appears to be a significant predictor in the

regression analysis. In addition to body-cathexis for three areas, importance of meeting the ideal body image for the two areas are important indicators in figure flaws compensation. The finding supports H3b.

Placing a high importance on meeting the ideal body image may threaten one's self-esteem and engender a sense of incompleteness. The tension state of incompleteness may be explained in terms of ideals of society as integrated and internalized in the self. The more subjects consider meeting the ideal body image important, the more they may seek figure flaws compensation through clothing to reduce the tension state of incompleteness or to reach their goals (to reach ideal body image).

H3c: Sex appeal is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image for the five areas.

F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and importance of meeting the ideal body image on sex appeal are presented in Table 24. In the regression model, R^2 is 0.30, meaning that the independent variables explain 31% of the variance in the sex appeal benefit sought from clothing. Comparison of R^2 in the regression model concerning body-cathexis only (Table 8) and in the regression model with body-cathexis and importance of meeting the ideal body image (Table 24) shows that inclusion of importance of meeting the ideal body image improves R^2 from 0.09 to 0.30. The test for the increment due to the variables on importance of meeting the ideal

body image shows that F-value is 9.96*, which means that the increment in explained variance due to the importance of meeting the ideal body image variables is statistically significant. Importance of meeting the ideal body image accounts 21% of the variance in sex appeal benefit sought ($0.30 - 0.09 = 0.21$). This implies that importance of meeting the ideal body image is an important predictor of the sex appeal benefit sought through clothing. T-values in Table 29 show that the body-cathexis score for head/upper body and importance of meeting the ideal body image for height and weight are significant predictors of the sex appeal benefit sought.

Table 24: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis and importance of meeting the ideal body image on sex appeal

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	2.59**	0.000	
body-cathexis for head/upper body	2.19*	0.227	0.20**
body-cathexis for lower body	-1.88	-0.212	0.04
body-cathexis for height	-1.71	-0.156	0.01
body-cathexis for weight	1.52	0.173	0.01
body-cathexis for torso	0.92	0.095	0.02
importance of ideal, head/upper body	0.26	0.035	0.42***
importance of ideal, lower body	-1.26	-0.182	0.35***
importance of ideal, height	3.29**	0.344	0.44***
importance of ideal, weight	2.82**	0.318	0.43***
importance of ideal, torso	0.32	0.034	0.23**
F (10, 166) = 7.28*** R ² = 0.30 Adj R ² = 0.26			

Note. *** $p < 0.001$, ** $p < 0.01$, and * $p < 0.05$

In addition to the t-values, Pearson correlation coefficients were calculated to see if importance of meeting the ideal body image for the other areas is related to sex appeal (Table 24). The coefficients show that importance of meeting the ideal body image for four areas are significantly related to sex appeal. Since the collinearity exists in the model, only importance of meeting the ideal body image for height and weight areas appear to be significant predictors in the regression analysis. While body-cathexis for head/upper is only related to sex appeal, importance of meeting the ideal body image for four areas are significantly related to sex appeal. Sex appeal may be better explained by importance of meeting the ideal body image than by body-cathexis. The finding supports H3c.

When meeting the ideal body image is considered to be important, the individual is likely to doubt her body image; high IMI (importance of meeting the ideal body image) may threaten her self-evaluation and self-esteem. To resolve the tension state which is resulted from high IMI, the individual may seek benefits from clothing. As IMI becomes higher, the more likely that she will seek benefits from clothing to reach the ideal body image and to enhance her self-esteem. Sex appeal is one of the benefits from clothing, and ideal body image is likely to be associated with sex appeal. The more meeting the ideal body image important, the more likely that she will seek sex appeal benefit through clothing to enhance her self-image.

H3d: Self-improvement is a direct function of the body-cathexis scores for five areas

(head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image for the five areas.

F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and importance of meeting the ideal body image on self-improvement are presented in Table 25. In the regression model, R^2 is 0.39, meaning that the independent variables explain 39% of the variance in the self-improvement benefit sought from clothing. Comparison of R^2 in the regression model concerning body-cathexis only (Table 9) and in the regression model with body-cathexis and importance of meeting the ideal body image (Table 25) shows that inclusion of importance of meeting the ideal body image improves R^2 from 0.10 to 0.39. The test for the increment due to the variables on importance of meeting the ideal body image shows that F-value is 15.78*, which means that the increment in explained variance due to the importance of meeting the ideal body image is statistically significant. Importance of meeting the ideal body image explains 29% of the variance in self-improvement benefit sought. This implies that importance of meeting the ideal body image is an important predictor of the self-improvement benefit sought through clothing. T-values in Table 30 show that importance of meeting the ideal body image for height and weight are significant predictors in self-improvement. It should be noted that the body-cathexis scores for head/upper body and torso which were predictors in the regression analysis of body-cathexis only are not significant predictors when importance of meeting the ideal body image is included in the analysis (Table 25). It means that the influence of meeting the ideal body image on the self-improvement benefit

sought may be stronger than that of body-cathexis. Placing a high importance on meeting the ideal body image may threaten individuals' self-esteem. The more that meeting the ideal body image is important, the more likely that the individuals seek self-improvement benefit through clothing.

Table 25: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis and importance of meeting the ideal body image on self-improvement

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	2.89**	0.000	
body-cathexis for head/upper body	1.52	0.148	0.10
body-cathexis for lower body	-0.75	-0.080	-0.12
body-cathexis for height	-1.67	-0.143	-0.08
body-cathexis for weight	0.53	0.056	-0.11
body-cathexis for torso	-0.27	-0.026	-0.14
importance of ideal, head/upper body	0.98	0.127	0.52***
importance of ideal, lower body	-0.35	-0.047	0.45***
importance of ideal, height	3.44**	0.337	0.53***
importance of ideal, weight	2.66**	0.281	0.52***
importance of ideal, torso	-0.71	-0.071	0.26***
F (10, 166) = 10.40*** R ² = 0.39 Adj R ² = 0.35			

Note. *** p<0.001 and ** p< 0.01

In addition to the t-values, Pearson correlation coefficients were calculated to see if importance of ideal body image for the other areas is related to self-improvement (Table 25). The coefficients show that importance of meeting the ideal body image for all five areas is significantly related to self-improvement. While the body-cathexis scores for all five areas are not related to self-improvement, importance of meeting the ideal body image for all five areas are significantly related to self-improvement. This comparison shows that self-improvement is better explained by importance of meeting the ideal body image than by body-cathexis. The finding supports H3d.

H3e: Individuality is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image for the five areas.

F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and importance of meeting the ideal body image on individuality are presented in Table 26. In the regression model, R^2 is 0.18, meaning that the independent variables explain 18% of the variance in the individuality benefit sought from clothing. Comparison of R^2 in the regression model concerning body-cathexis only (Table 10) and in the regression model with body-cathexis and importance of meeting the ideal body image (Table 26) shows that inclusion of importance of meeting the ideal body image improves R^2 from 0.09 to 0.18. The test for the increment due to the variables on importance of meeting the ideal body image variables shows that F-value is 3.64*, which means that the

increment in explained variance due to the importance of meeting the ideal body image is statistically significant. T-values in Table 26 show that the body-cathexis score for weight is the only significant predictor of individuality.

Table 26: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis and importance of meeting the ideal body image on individuality

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	3.41**	0.000	
body-cathexis for head/upper body	1.30	0.146	0.18**
body-cathexis for lower body	0.92	0.112	0.22**
body-cathexis for height	-1.44	-0.143	0.09
body-cathexis for weight	1.92*	0.238	0.25***
body-cathexis for torso	-0.58	-0.065	0.13
importance of ideal, head/upper body	-1.07	-0.159	0.20**
importance of ideal, lower body	0.06	0.009	0.24**
importance of ideal, height	1.50	0.170	0.26***
importance of ideal, weight	1.67	0.204	0.20**
importance of ideal, torso	1.08	0.126	0.26***
F (10, 166) = 3.57** R ² = 0.18 Adj R ² = 0.13			

Note. *** $p < 0.001$, ** $p < 0.01$, and * $p < 0.05$

In addition to the t-values, Pearson correlation coefficients were calculated to see if importance of ideal body image for the other areas is related to individuality (Table 26).

The coefficients show that importance of meeting the ideal body image for height and

torso areas are significantly related to individuality. However, in the regression analysis, importance of meeting the ideal body image for all five areas not significant predictors. There may be a possible explanation; since the independent variables (importance of meeting the ideal body image variables) are correlated (Table 4b) and since no particular independent variable has a notably high correlation with individuality compared to the other independent variables (Table 26), there might be no significant predictors in the regression analysis. While body-cathexis for weight is related to individuality, importance of meeting the ideal body image for the two areas is related to individuality. Individuality may be explained by both body-cathexis and importance of meeting the ideal body image. The finding partially supports H3e.

Hypothesis 4 deals with the effects of importance of meeting the ideal body image and body-cathexis on clothing attitude and clothing behavior. Multiple regression was used in separate analyses with clothing attitude and each clothing behavior variable as the dependent variables. The independent variables are the body-cathexis scores for selected areas of body parts and importance of meeting the ideal body image for the areas. Also, Pearson correlation coefficient was calculated to investigate the relationships between each independent variable and the dependent variables.

H4a: Clothing attitude is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image for the five areas.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 48 in Appendix D). The variance inflation for each independent variable was less than 10, which is the standard score for comparison. The condition number was 1930.47, which is higher than the standard comparison score of 1,000. Therefore, the collinearity problem exists in the regression model in H4a.

F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and IMI on clothing attitude are presented in Table 27. In the regression model, R^2 is 0.40, meaning that the independent variables explain 40% of the variance in clothing attitude. Comparison of R^2 in the regression model concerning body-cathexis only (Table 11) and in the regression model with body-cathexis and importance of meeting the ideal body image (Table 27) shows that inclusion of importance of meeting the ideal body image improves R^2 from 0.13 to 0.40. The test for the increment due to the variables on importance of meeting the ideal body image shows that F-value is 14.94*, which means that the increment in explained variance due to the variables on importance of meeting the ideal body image is statistically significant. Importance of meeting the ideal body image explains 27% of the variance in clothing attitude ($0.40 - 0.13 = 0.27$). This implies that importance of meeting the ideal body image is an important predictor of clothing attitude. T-values in Table 27 show that body-cathexis for head/upper body and importance of

meeting the ideal body image for head/upper body, lower body, and weight are significant predictors of clothing attitude. Among the significant predictors in clothing attitude, standardized regression coefficients show that importance of meeting the ideal body image for weight is the most significant predictor of clothing attitude.

Table 27: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis and importance of meeting the ideal body image on clothing attitude

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	5.45***	0.000	
body-cathexis for head/upper body	2.15*	0.207	0.34***
body-cathexis for lower body	-0.19	-0.020	0.13
body-cathexis for height	-1.58	-0.134	0.12
body-cathexis for weight	1.77	0.187	0.09
body-cathexis for torso	0.89	0.085	0.15*
importance of ideal, head/upper body	1.99*	0.253	0.47***
importance of ideal, lower body	2.44**	0.326	0.33***
importance of ideal, height	1.64	0.158	0.37***
importance of ideal, weight	4.61***	0.481	0.52***
importance of ideal, torso	0.02	0.002	0.21**
F (10, 166) = 11.17***			
R ² = 0.40			
Adj R ² = 0.37			

Note. *** p<0.001, ** p< 0.01, and * p<0.05

In addition to the t-values, Pearson correlation coefficients were calculated to see if importance of ideal body image for the other areas is related to clothing attitude (Table 27). The coefficients show that importance of meeting the ideal body image for four areas

are significantly related to clothing attitude. While body-cathexis for head/upper body is related to clothing attitude, importance of meeting the ideal body image for four areas is related to clothing attitude. This may imply that clothing attitude is explained better by importance of meeting the ideal body image than by body-cathexis. Several researchers have suggested that the relationship between body satisfaction and clothing attitude/clothing interest may not be uni-dimensional and that more research is needed to clarify these relationships (Damhorst & Littrell, 1984; Davis, 1985; Kaiser, 1990; Shim, Kotsiopulos, & Knoll, 1991). The finding of this study show that importance of meeting the ideal body image for all five areas are significantly related to clothing attitude, and that body-cathexis for specific areas of body parts (e.g., head/upper body and torso) can partially explain clothing attitude. H4a is supported.

Through self-esteem motive, consumers tend to seek products to reduce the gap between actual and ideal image if meeting the ideal body image is important to them. Clothing is a second skin and it is an important means in enhancing one's self image. The more one considers meeting the ideal body image important, the more likely that she will use clothing as a means to reduce the gap between actual and ideal body image and to make her body look like the ideal.

H4b-1: Satisfaction with the pant length in ready-to-wear is a function of the body-cathexis scores for two areas (lower body and height) and importance of meeting the ideal body image for the two areas.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 49 in Appendix D). The variance inflation for each independent variable was less than 10, which is the standard score for comparison. The condition number was 358.39, which is less than the standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H4b-1.

F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and importance of meeting the ideal body image on satisfaction with pant length are presented in Table 28. In the regression model, R^2 is 0.24, meaning that the independent variables explain 24% of the variance in satisfaction with the pant length. Comparison of R^2 in the regression model concerning body-cathexis only (Table 15) and in the regression model with body-cathexis and importance of meeting the ideal body image (Table 28) shows that inclusion of the variables on importance of meeting the ideal body image improves R^2 from 0.20 to 0.24. The test for the increment due to importance of meeting the ideal body image shows that F-value is 4.53*, which means that the increment in explained variance due to the variables on importance of meeting the ideal body image is statistically significant.

T-values show that body-cathexis for height and importance of meeting the ideal body image for lower body are significant predictors of satisfaction with the pant length in ready-to-wear. H4b-1 is partially supported. Cognitive dissonance theory may explain the positive relationship between satisfaction with ready-to-wear and importance of meeting the ideal body image. If meeting the ideal body image is important, one tends to seek proper

ready-to-wear clothing to reduce the gap between actual and ideal image. However, she may be unable to find ready-to-wear clothing which can meet her high expectations. Therefore, she may be actually dissatisfied with ready-to-wear clothing. Her expectations through self-esteem motive and dissatisfaction with ready-to-wear may result in cognitive dissonance, which may make her feel uncomfortable. Therefore, to resolve the cognitive dissonance, she may decide that she is satisfied with the ready-to-wear.

Table 28: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis and importance of meeting the ideal body image on satisfaction with the pant length in ready-to-wear

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	0.69	0.000	
body-cathexis for lower body	0.68	0.054	0.28***
body-cathexis for height	5.03***	0.405	0.44***
importance of ideal, lower body	2.65**	0.257	0.20**
importance of ideal, height	-0.98	-0.096	0.07
F (4, 172) = 13.46*** R ² = 0.24 Adj R ² = 0.22			

Note. *** $p < 0.001$ and ** $p < 0.01$

H4b-2: Satisfaction with the fit at thighs/hips/waist is a function of the body-cathexis score for weight and importance of meeting the ideal body image for weight.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 50 in Appendix D). The variance inflation for both independent variables was less than 10, which is the standard score for comparison. The condition number was 289.50, which is less than the standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H4b-2.

F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and importance of meeting the ideal body image on satisfaction with the fit at thighs are presented in Table 29 and with the fit at hips are presented in Table 30 and with the fit at waist are presented in Table 31. In the regression model on Table 29, R^2 is 0.31, meaning that the independent variables explain 31% of the variance in satisfaction with the fit at thighs. T- values and Pearson correlation coefficients show that body-cathexis is the only significant predictor of satisfaction with the fit at thighs. Importance of meeting the ideal image is not related to satisfaction with the fit at thighs.

Table 29: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis for weight and importance of meeting the ideal body image for weight on satisfaction with the fit at thighs in ready-to-wear

Multiple regression			r
Variables	t-value	standardized estimate	0.54*** -0.04
intercept	1.01	0.000	
body-cathexis for weight	8.73***	0.567	
importance of ideal, weight	1.47	0.095	
F (2, 174) = 38.27*** R ² = 0.31 Adj R ² = 0.30			

Note. *** $p < 0.001$

In the regression model on Table 30, R^2 is 0.33, meaning that the independent variables explain 33% of the variance in satisfaction with the fit at hips in ready-to-wear. T-values and Pearson correlation coefficients show that body-cathexis for weight is the only significant predictor of satisfaction with the fit at hips.

Table 30: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis for weight and importance of meeting the ideal body image for weight on satisfaction with the fit at hips in ready-to-wear

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	1.44	0.000	
body-cathexis for weight	9.07***	0.581	0.57***
importance of ideal, weight	0.87	0.056	-0.08
F (2, 174) = 41.97*** R ² = 0.33 Adj R ² = 0.32			

Note. *** $p < 0.001$

In the regression model on Table 31, R^2 is 0.24, meaning that the independent variables explain 24% of the variance in satisfaction with the fit at waist in ready-to-wear. T-values show that both body-cathexis for weight and importance of meeting the ideal

body image for weight are significant predictors of satisfaction with the fit at waist. H4b-2 is partially supported.

Table 31: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis for weight and importance of meeting the ideal body image for weight on satisfaction with the fit at waist in ready-to-wear

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	0.79	0.000	
body-cathexis for weight	7.31***	0.498	0.46***
importance of ideal, weight	2.36*	0.160	0.04
F (2, 174) = 26.89***			
R ² = 0.24			
Adj R ² = 0.23			

Note. *** p<0.001 and * p< 0.05

H4b-3: Satisfaction with the fit at bust and neckline is a function of the body-cathexis score for torso and importance of meeting the ideal body image for torso.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 51 in Appendix D). The variance inflation for both independent variables was less than 10, which is the standard score for comparison. The condition number was 168.48, which is less than the

standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H4b-3.

F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and importance of meeting the ideal body image on satisfaction with the fit at bust are presented in Table 32 and with the fit at hips are presented in Table 33 . In the regression model on Table 32, R² is 0.29, meaning that the independent variables explain 29% of the variance in satisfaction with the fit at bust. T- values and Pearson correlation coefficients show that body-cathexis is the only significant predictor of satisfaction with the fit at bust. Importance of meeting the ideal image is not related to satisfaction with the fit at bust.

Table 32: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis for torso and importance of meeting the ideal body image for torso on satisfaction with the fit at bust in ready-to-wear

Multiple regression			r
Variables	t-value	standardized estimate	0.53*** 0.09
intercept	1.52	0.000	
body-cathexis for torso	8.32***	0.531	
importance of ideal, torso	1.75	0.111	
F (2, 174) = 35.77*** R ² = 0.29 Adj R ² = 0.28			

Note. *** p<0.001

In the regression model on Table 33, R^2 is 0.24, meaning that the independent variables explain 24% of the variance in satisfaction with the fit at neck in ready-to-wear. T-values and Pearson correlation coefficients show that body-cathexis for torso is the only significant predictor in satisfaction with the fit at neck. H4b-3 is partially supported.

Table 33: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis for torso and importance of meeting the ideal body image for torso on satisfaction with the fit at neck in ready-to-wear

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	5.17***	0.000	
body-cathexis for torso	7.29***	0.483	0.48***
importance of ideal, torso	-0.46	-0.030	-0.04
F (2, 174) = 26.78*** R ² = 0.24 Adj R ² = 0.23			

Note. *** $p < 0.0001$

H4b-4: Satisfaction with the variety in ready-to-wear is a function of the body-cathexis scores for two areas (height and weight) and importance of meeting the ideal body image for the two areas.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 53 in Appendix D). The variance inflation for each independent variable was less than 10, which is the standard score for comparison. The condition number was 552.61, which is less than the

standard comparison score of 1,000. Therefore, the collinearity problem may not be serious in the regression model in H4b-4.

F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and importance of meeting the ideal body image on satisfaction with the variety in ready-to-wear are presented in Table 34. In the regression model, R^2 is 0.32, meaning that the independent variables explain 32% of the variance in satisfaction with the variety in ready-to-wear. Comparison of R^2 in the regression model concerning body-cathexis only (Table 18) and in the regression model with body-cathexis and importance of meeting the ideal body image (Table 34) shows that inclusion of importance of meeting the ideal body image improves R^2 from 0.23 to 0.32. The test for the increment due to the variables on importance of meeting the ideal body image shows that F-value is 11.38*, which means that the increment in explained variance due to the importance of meeting the ideal body image is statistically significant.

T-values show that body-cathexis for weight and importance of meeting the ideal body image for height and weight are significant predictors of satisfaction with the variety in ready-to-wear. That is, the more one is satisfied with weight and considers meeting the ideal weight is important, the more she will be satisfied with the variety in ready-to-wear. However, the more one considers meeting the ideal height important, the less she will be satisfied with the variety in ready-to-wear. H4b-4 is partially supported.

The positive relationship between importance of meeting the ideal body image for weight and satisfaction with ready-to-wear variety may be explained by cognitive

dissonance theory and self-esteem motive. Through self-esteem motive, one tends to seek ready-to-wear clothing to reduce the gap between actual and ideal image if meeting the ideal body image is important to her. However, she may be unable to find ready-to-wear clothing which can meet her high expectations. Therefore, she may be actually dissatisfied with ready-to-wear clothing. Her expectations through self-esteem motive and dissatisfaction with ready-to-wear may result in cognitive dissonance, which may make her feel uncomfortable.

Therefore, to resolve this cognitive dissonance, she may decide that she is satisfied with the ready-to-wear.

Table 34: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis and importance of meeting the ideal body image on satisfaction with the variety in ready-to-wear

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	1.15	0.000	
body-cathexis for height	1.43	0.110	0.38***
body-cathexis for weight	5.99***	0.484	0.45***
importance of ideal, height	-3.27**	-0.251	-0.04
importance of ideal, weight	4.72***	0.377	0.12
F (4, 172) = 19.93***			
R ² = 0.32			
Adj R ² = 0.30			

Note. *** p<0.001 and ** p< 0.01

The negative relationship between importance of meeting the ideal body image for height and satisfaction with ready-to-wear variety may be explained by self-esteem motive

and satisfaction theory. Through self-esteem motive, consumers tend to seek ready-to-wear clothing to reduce the gap between actual and ideal image if meeting the ideal body image is important to them. According to consumer satisfaction theory, consumers can be dissatisfied with the products when their expectations and standards are high. Therefore, the more that meeting the ideal body image is important, the more dissatisfied consumers may be with ready-to-wear clothing. Because the ideal body image is incorporated in ready-to-wear clothing and because it may be hard to find the proper clothing to reduce the gap between actual and ideal body image, consumers may be dissatisfied with the ready-to-wear if meeting the ideal body image is important to them.

H4c-1: In-store shopping interest is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image for the five areas.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 48 in Appendix D). The variance inflation for each independent variable was less than 10, which is the standard score for comparison. The condition number was 1930.47, which is higher than the standard comparison score of 1,000. Therefore, the collinearity problem exists in the regression model in H4c-1.

F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and importance of meeting the ideal body image on in-store shopping interest are presented in Table 35. In the regression model, R^2 is 0.27, meaning that the independent

variables explain 27% of the variance in in-store shopping interest. Comparison of R^2 in the regression model concerning body-cathexis only (Table 19) and in the regression model with body-cathexis and importance of meeting the ideal body image (Table 35) shows that inclusion of the variables on importance of meeting the ideal body image improves R^2 from 0.16 to 0.27. The test for the increment due to importance of meeting the ideal body image shows that F-value is 5.00*, which means that the increment in explained variance due to the importance of meeting the ideal body image is statistically significant. T-values in Table 35 show that body-cathexis for head/upper body and weight, and importance of meeting the ideal body image for head/upper body, lower body, and weight are significant predictors of in-store shopping interest.

Table 35: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis and importance of meeting the ideal body image on in-store shopping interest

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	3.00**	0.000	0.34***
body-cathexis for head/upper body	1.90*	0.202	
body-cathexis for lower body	-0.87	-0.101	
body-cathexis for height	0.03	0.002	
body-cathexis for weight	2.00*	0.229	
body-cathexis for torso	0.33	0.035	
importance of ideal, head/upper body	3.18**	0.448	0.35***
importance of ideal, lower body	2.28**	0.339	0.19*
importance of ideal, height	0.01	0.001	0.21**
importance of ideal, weight	2.00**	0.231	0.32***
importance of ideal, torso	-0.14	-0.015	0.10
F (10, 166) = 6.00***			
$R^2 = 0.27$			
Adj $R^2 = 0.22$			

Note. *** $p < 0.001$, ** $p < 0.01$, and * $p < 0.05$

In addition to the t-values, Pearson correlation coefficients were calculated to see if importance of ideal body image for the other areas is related to in-store shopping interest (Table 35). The coefficients show that importance of meeting the ideal body image for head/upper body and weight are significantly related to in-store shopping interest. While body-cathexis for head/upper body is correlated with in-store shopping interest, importance of meeting the ideal body image for the two areas is correlated with in-store shopping interest. In-store shopping interest is explained by both body-cathexis and importance of meeting the ideal body image. H4c-1 is supported.

Self-esteem motive may be used to explain the effects of importance of meeting the ideal body image on in-store shopping interest. Through self-esteem motive, consumers tend to shop for proper clothing to reduce the gap between actual and ideal image if meeting the ideal body image is important to them. Consumers may like and enjoy in-store shopping which can provide a variety of clothing to enhance their self image.

H4c-2: Catalog shopping is a function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image for the five areas.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 48 in Appendix D). The variance inflation for each independent variable was less than 10, which is the standard score for comparison. The condition number was 1930.47, which is higher than

the standard comparison score of 1,000. Therefore, the collinearity problem exists in the regression model in H4c-2.

F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and importance of meeting the ideal body image on catalog shopping are presented in Table 36. In the regression model, R^2 is 0.17, meaning that the independent variables explain 17% of the variance in catalog shopping. Comparison of R^2 in the regression model concerning body-cathexis only (Table 20) and in the regression model with body-cathexis and importance of meeting the ideal body image (Table 36) shows that inclusion of the variables on importance of meeting the ideal body image improves R^2 from 0.10 to 0.17. The test for the increment due to importance of meeting the ideal body image shows that F-value is 2.80*, which means that the increment in explained variance due to the importance of meeting the ideal body image is statistically significant.

T-values in Table 36 show that body-cathexis for head/upper body and torso, and importance of meeting the ideal body image for height are significant predictors of catalog shopping. That is, the more one is satisfied with her torso, the more she will be engaged in catalog shopping. However, the more one is satisfied with head/upper body and considers meeting the ideal body image for height important, the less she may engage in catalog shopping. The finding supports H4c-2.

Self-esteem motive may explain the effects of importance of meeting the ideal body image on catalog shopping. Through self-esteem motive, consumers tend to shop for proper clothing to reduce the gap between actual and ideal image if meeting the ideal body image is

important to them. Consumers may avoid catalog shopping if meeting the ideal body image is important because it may not provide various benefits when searching for proper clothes for their bodies.

Table 36: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis and importance of meeting the ideal body image on catalog shopping

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	6.82***	0.000	
body-cathexis for head/upper body	-2.55*	-0.289	-0.13
body-cathexis for lower body	-0.54	-0.066	0.06
body-cathexis for height	0.03	0.002	-0.02
body-cathexis for weight	0.39	0.048	0.07
body-cathexis for torso	2.76**	0.314	0.16*
importance of ideal, head/upper body	0.69	0.103	-0.23**
importance of ideal, lower body	-0.97	-0.153	-0.22**
importance of ideal, height	-2.11*	-0.241	-0.30***
importance of ideal, weight	-0.11	-0.014	-0.22**
importance of ideal, torso	0.71	0.083	-0.07
F (10, 166) = 3.30** R ² = 0.17 Adj R ² = 0.12			

Note. *** $p < 0.001$, ** $p < 0.01$, and * $p < 0.05$

H4d: Fashion innovativeness is a direct function of the body-cathexis scores for five areas (head/upper body, lower body, height, weight, and torso) and importance of meeting the ideal body image for the five areas.

Multicollinearity diagnostics: VIF and eigenvalues were examined (see Table 48 in Appendix D). The variance inflation for each independent variable was less than 10, which is the standard score for comparison. The condition number was 1930.47, which is higher than the standard comparison score of 1,000. Therefore, the collinearity problem exists in the regression model in H4d.

F-value, t-values, and Pearson correlation coefficients for the effects of body-cathexis and importance of meeting the ideal body image on fashion innovativeness are presented in Table 37. In the regression model, R^2 is 0.28, meaning that the independent variables explain 28% of the variance in fashion innovativeness. Comparison of R^2 in the regression model concerning body-cathexis only (Table 21) and in the regression model with body-cathexis and importance of meeting the ideal body image (Table 37) shows that inclusion of importance of meeting the ideal body image improves R^2 from 0.12 to 0.28. The test for the increment due to importance of meeting the ideal body image shows that F-value is 7.38*, which means that the increment in explained variance due to the importance of meeting the ideal body image is statistically significant. Importance of meeting the ideal body image explains 16% of the variance in fashion innovativeness ($0.28 - 0.12 = 0.16$). This implies that importance of meeting the ideal body image is an important predictor of fashion innovativeness. T-values in Table 37 show that the body-cathexis score for head/upper body, and importance of meeting the ideal body image for head/upper body and height are significant predictors of fashion innovativeness. That is, the more one is satisfied with her head/upper body and considers meeting the ideal body

image for head/upper body and height important, the higher the degree of fashion innovativeness.

Table 37: F-value, t-values, and Pearson correlation coefficients for the effect of body-cathexis and importance of meeting the ideal body image on fashion innovativeness

Multiple regression			r
Variables	t-value	standardized estimate	
intercept	3.11**	0.000	
body-cathexis for head/upper body	2.49*	0.263	0.29***
body-cathexis for lower body	1.03	0.119	0.13
body-cathexis for height	-1.74	-0.162	0.08
body-cathexis for weight	0.41	0.048	0.07
body-cathexis for torso	-0.28	-0.029	0.08
importance of ideal, head/upper body	2.49*	0.347	0.40***
importance of ideal, lower body	-1.73	-0.255	0.27***
importance of ideal, height	1.91*	0.203	0.35***
importance of ideal, weight	1.29	0.148	0.36***
importance of ideal, torso	-0.14	-0.015	0.36***
F (10, 166) = 6.32*** R ² = 0.28 Adj R ² = 0.23			

Note. *** $p < 0.001$, ** $p < 0.01$, and * $p < 0.05$

In addition to the t-values, Pearson correlation coefficients were calculated to see if importance of ideal body image for the other areas is related to fashion innovativeness (Table 37). The coefficients show that importance of meeting the ideal body image for all five areas is significantly related to fashion innovativeness. While body-cathexis for head/upper body only is correlated with fashion innovativeness, importance of meeting the ideal body image for all five areas is correlated with fashion innovativeness. This may

imply that fashion innovativeness is explained better by importance of meeting the ideal body image than by body-cathexis. The finding of this study show that importance of meeting the ideal body image for all five areas is significantly related to fashion innovativeness, and that body-cathexis for one specific body area, head/upper body, can partially explain fashion innovativeness. If meeting the ideal body image is important, the individuals are likely to try new clothing fashions to reduce the gap between actual and ideal image. They may try new ideas and things in clothing to enhance their body image and make their bodies look like the ideal. H4d is supported.

Post-hoc Analysis

Post-hoc analysis was performed to examine moderating effects of IMI (importance of meeting the ideal body image) and clothing attitude on the relationships between body-cathexis and clothing benefits sought/ clothing behavior. There are several reasons for the post-hoc analysis. The results regarding the main effect of IMI on clothing benefits sought and clothing behavior may be confounded; multicollinearity problems existed in the regression model. Because the main effect of IMI is questionable, further analysis (e.g., interaction effect) may be needed. Also, previously published research has suggested the moderating effects of clothing attitude and IMI on the relationships between body-cathexis and clothing behavior. Kaiser (1990) suggested that the relationship between body-cathexis and clothing attitude may not be uni-dimensional and that more research needs to

be done. Shim et al. (1991) found the interaction effects of body-cathexis and clothing attitude on dimensions of clothing behavior. For the relationship between body satisfaction and self-esteem, Salem (1990) concluded that there were interaction effects of body-cathexis and IMI on self-esteem of female college students.

Another reason to suspect the moderating effects of IMI and clothing attitude on the relationship between body-cathexis and clothing behavior is that conflicting findings exist in regard to the relationship between body-cathexis and clothing behavior. Some studies (e.g., Hwang, 1993) found a significant relationship, but others (e.g., Davis, 1985) found no relationships. This conflict may imply that a higher degree of body satisfaction does not always result in a higher degree of clothing behavior. In this context, IMI and clothing attitude serve as moderators for the relationship.

For example, suppose an individual who is satisfied with her body. When meeting the ideal body image is not important to her, she may not care about clothing or other products which can maintain her body image and enhance her self-esteem. Thus, in case of low level of IMI, the effect of body-cathexis on dimensions of clothing behavior may not be strong. However, as the level of IMI increases, the relationship between body satisfaction and clothing behavior may become stronger. When meeting the ideal body image is important, the individual may care about clothing which can maintain or enhance her body image. In case of high level of IMI, the effect of body-cathexis on dimensions of clothing behavior is likely to be strong.

Clothing attitude also serves as a moderator for the relationship. The individual's body satisfaction can affect clothing behavior when she has a favorable attitude toward clothing. If she does not have a favorable attitude toward clothing, she may not relate her body satisfaction to clothing. Thus, in case of low level of clothing attitude, the effect of body satisfaction on dimensions of clothing behavior may not be strong. However, as the level of clothing attitude increases, the relationship between body satisfaction and clothing behavior may become stronger. If she has a favorable attitude toward clothing, she may use clothing and actively be involved in clothing behavior to maintain or enhance her body image. In case of high level of clothing attitude, the effect of body-cathexis on dimensions of clothing behavior is likely to be strong.

Therefore, it is important to investigate the moderating effects of IMI and clothing attitude on the relationships between body-cathexis and clothing behavior. In the post-hoc analysis, the following will be presented: alternative model for the moderating effects, hypotheses, statistical analyses, results, and interpretation of the results. For the discussion and interpretation of the results, only one dependent variable will be selected.

Moderating effect model. Figure 2 presents the moderating effects of IMI and clothing attitude on the relationships between body-cathexis and clothing benefits sought/ clothing behavior.

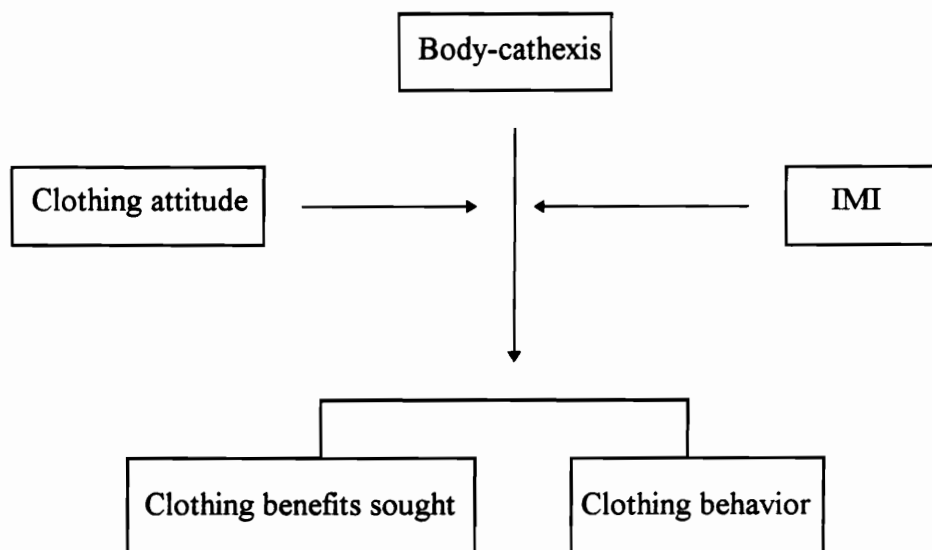


Figure 2: Moderating effect model

Factor analysis. In the post-hoc analysis, body-cathexis and IMI for the whole body area together were used, based on the results of a factor analysis. Body-cathexis for the whole body area together had an eigenvalue of 8.77, and factor loadings ranged from 0.59 to 0.76. IMI for the whole body area together had an eigenvalue of 9.92, and factor loadings ranged from 0.53 to 0.81

Hypotheses. For the moderating effects of IMI and clothing attitude, research hypotheses were formulated as stated below. Hypothesis 1 dealt with the interaction effects of body-cathexis and IMI on clothing benefits sought and clothing behavior. Hypothesis 2 dealt with the interaction effects of body-cathexis and clothing attitude on clothing benefits sought and clothing behavior.

H1. Moderating effect of IMI

H1a: The relationship between body-cathexis and clothing benefits sought is moderated by IMI.

The specific direction of the interaction effect can be hypothesized for two cases;

1) when the relationship between body-cathexis and clothing benefits sought is positive and 2) when the relationship is negative. Among the clothing benefits sought variables, figure flaws compensation is the only one which has an inverse relationship with body-cathexis.

1) When the relationship is positive (when the dependent variables are fashion image, sex appeal, self-improvement, and individuality)

In this case, the relationship between body-cathexis and fashion image (sex appeal, self-improvement, and individuality) will be stronger when meeting the ideal body image is important than when it is not important. If meeting the ideal body image is not important, the individual may not care about clothing benefits which can enhance her body image and self-esteem, regardless of their body-cathexis. Thus, in case of low level of IMI, the effect of body-cathexis on the clothing benefits sought may be weak. However, as the level of IMI increases, the relationship between body satisfaction and clothing benefits sought becomes stronger. Placing a high importance on meeting the ideal body image may make the individual to seek clothing benefits which can maintain or enhance her body image. In case of high level of IMI, the effect of body-cathexis on clothing benefits sought is likely

to strong. The hypothesized relationship for fashion image (sex appeal, self-improvement, and individuality) is illustrated graphically (Figure 3).

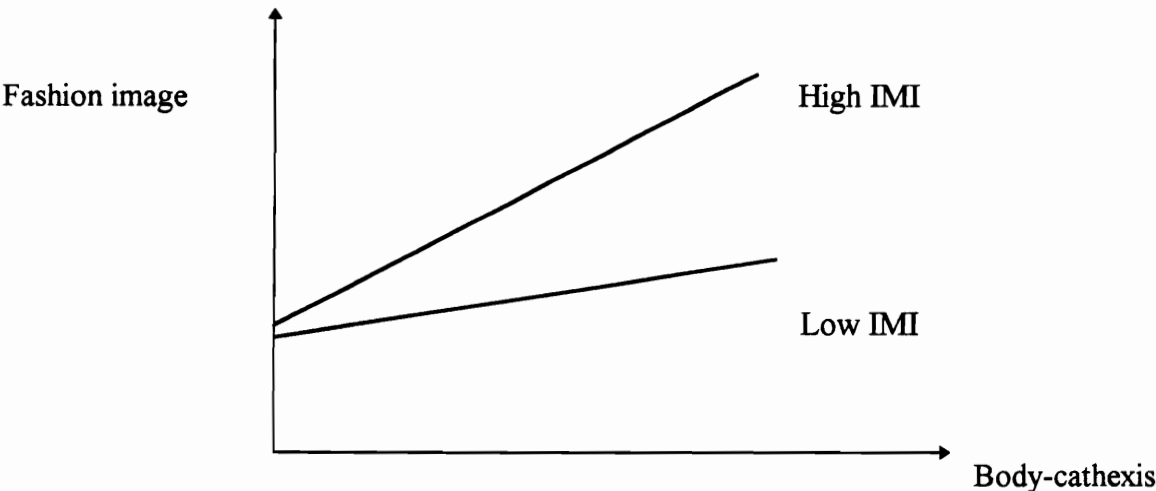


Figure 3: The hypothesized relationship for IMI and fashion image

2) When the relationship is negative (when the dependent variable is figure flaws compensation)

The negative relationship between body-cathexis and figure flaws compensation will be weaker when meeting the ideal body image is important than when it is not important. In case of low level of IMI, there is an inverse relationship between body-cathexis and the use of clothing to compensate for figure flaws, implying that the subjects who are satisfied with their bodies may not use clothing as a means for figure flaws compensation. However, as the level of IMI increases, the individual who is satisfied with her body may become concerned about using a clothing to compensate for figure flaws. In case of high level of IMI, even the individual who is satisfied with her body may seek figure flaws compensation benefit through clothing to reach an ideal body image.

Therefore, the negative relationship between body-cathexis and figure flaws compensation will be weaker when meeting the ideal body image is considered to be important. The hypothesized relationship for figure flaws compensation is illustrated graphically (Figure 4).

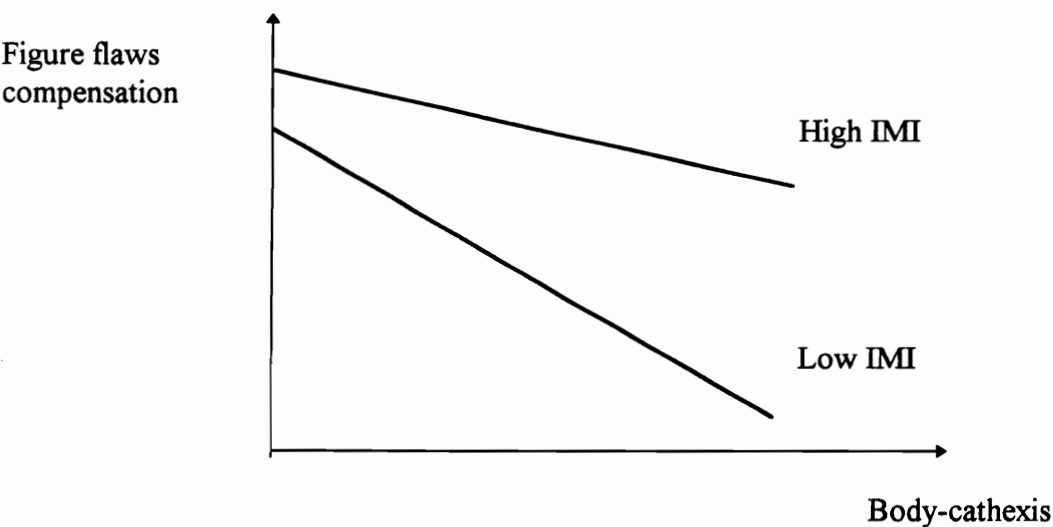


Figure 4: The hypothesized relationship for IMI and figure flaws compensation

H1b: The relationship between body-cathexis and clothing behavior is moderated by IMI.

Specifically, the relationship between body-cathexis and clothing behavior (e.g. fashion innovativeness, in-store shopping interest) will be stronger when meeting the ideal body is important. In case of low level of IMI, the individual may not be involved in clothing behavior which can enhance her body image and self-esteem, regardless of their body-cathexis. Therefore, the effect of body-cathexis on clothing behavior may be weak. However, as the level of IMI increases, the relationship between body satisfaction and

clothing behavior becomes stronger. Placing a high importance on meeting the ideal body image may make the individual to be involved in clothing behavior which can maintain or enhance her body image. In case of high level of IMI, the effect of body-cathexis on clothing behavior is likely to be strong. The hypothesized relationship for clothing behavior is illustrated graphically (Figure 5).

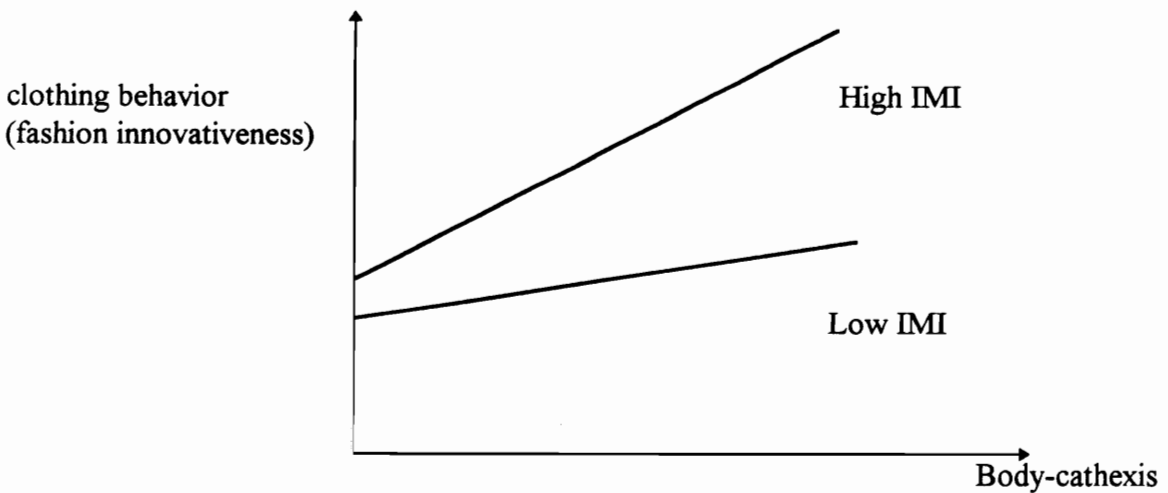


Figure 5: The hypothesized relationship for IMI and clothing behavior

H2. Moderating effect of Clothing attitude

H2a: The relationship between body-cathexis and clothing benefits sought is moderated by clothing attitude (CA).

The specific direction of the interaction effect can be hypothesized for two cases;

- 1) when the relationship between body-cathexis and clothing benefits sought is positive
- and 2) when the relationship is negative. Among the clothing benefits sought variables,

figure flaws compensation is the only one which has an inverse relationship with body-cathexis.

1) When the relationship is positive (when the dependent variables are fashion image, sex appeal, self-improvement, and individuality)

In this case, the relationship between body-cathexis and fashion image (sex appeal, self-improvement, and individuality) will be stronger when the individual has a favorable attitude toward clothing than she has the unfavorable attitude. If the individual has an unfavorable attitude toward clothing, she may not care about clothing benefits which can enhance her body image and self-esteem, regardless of her body-cathexis. Thus, in case of low level of CA (clothing attitude), the effect of body-cathexis on the clothing benefits sought may be weak. However, as the level of clothing attitude increases, the relationship between body satisfaction and clothing benefits sought becomes stronger. The individuals who have a favorable attitude toward clothing may relate their body satisfaction to clothing and seek clothing benefits which can maintain or enhance their body image. In case of high level of CA, the effect of body-cathexis on the clothing benefits sought is likely to be strong. The hypothesized relationship for fashion image (sex appeal, self-improvement, and individuality) is illustrated graphically (Figure 6).

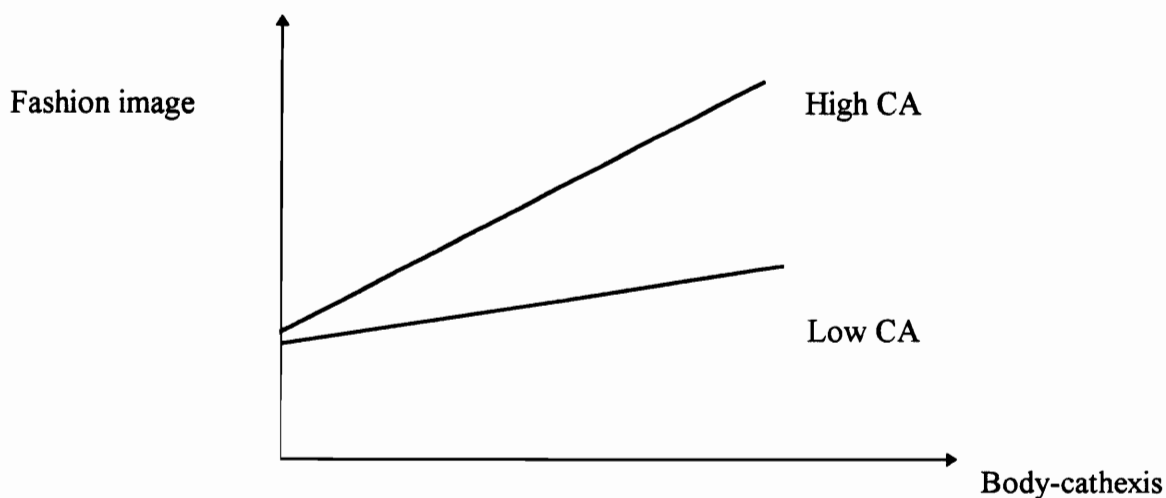


Figure 6: The hypothesized relationship for CA and fashion image

2) When the relationship is negative (when the dependent variable is figure flaws compensation)

The negative relationship between body-cathexis and figure flaws compensation will be weaker when the individual has a favorable attitude toward clothing than when she has the unfavorable attitude. In case of low level of CA, the individual who is satisfied with her body may not use a clothing for figure compensation. However, as the level of clothing attitude increases, she may become interested in using a clothing for her body and seek diverse benefits in clothing including figure flaws compensation. Therefore, in case of high level of CA, even the individual who is satisfied with her body may seek figure flaws compensation benefit through clothing. This may result in a weak negative relationship between body-cathexis and figure flaws compensation. The hypothesized relationship for figure flaws compensation is illustrated graphically (Figure 7).

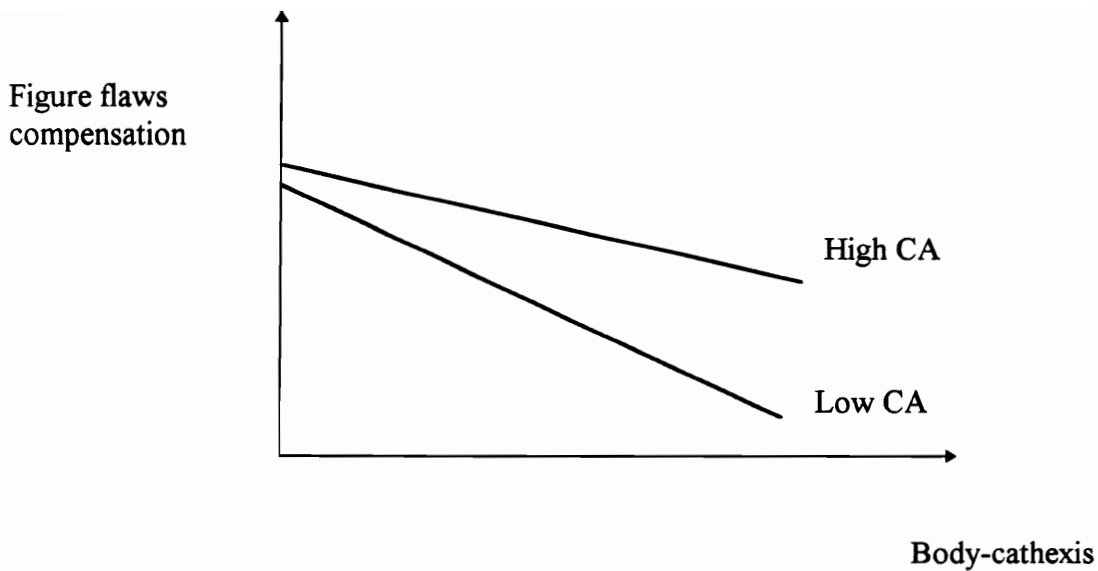


Figure 7: The hypothesized relationship for CA and figure flaws compensation

H2b: The relationship between body-cathexis and clothing behavior is moderated by clothing attitude.

Specifically, the relationship between body-cathexis and clothing behavior (e.g., fashion innovativeness, in-store shopping interest) will be stronger when the individual has a favorable attitude toward clothing than she has the unfavorable attitude. In case of low level of CA, even the individual who is satisfied with body may not be involved in clothing behavior because clothing is not important to her. Although clothing is an important means for enhancing one's body, other means exist in relation to body image. However, as the level of clothing attitude increases, the relationship between body satisfaction and clothing behavior may become stronger. A favorable attitude toward clothing may make

the individual to be involved in clothing behavior which can maintain or enhance her body image. In case of high level of CA, the effect of body-cathexis on clothing behavior is likely to be strong. The hypothesized relationship for clothing behavior is illustrated graphically (Figure 8).

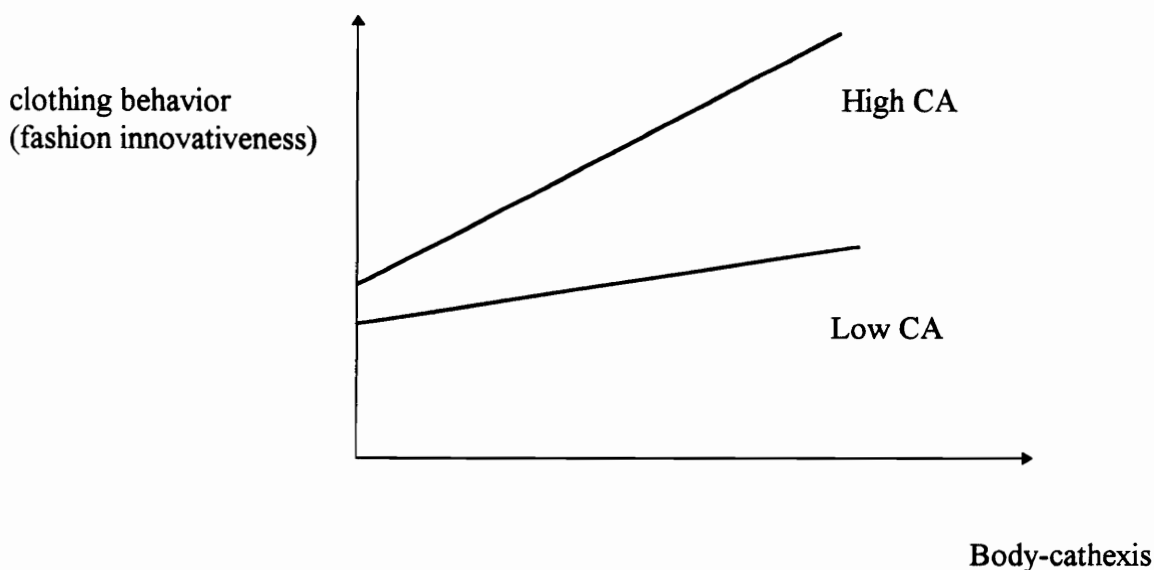


Figure 8: The hypothesized relationship for CA and clothing behavior

Statistical analysis. Multiple regression was used to test the hypotheses 1 and 2.

H1: To test the presence of moderating effects of IMI, the hypotheses were formulated as shown below.

Clothing benefits sought (dependent v) = $BC + BC \cdot IMI$ (independent vs)

Clothing behavior (dependent v) = $BC + BC \cdot IMI$ (independent vs), when

BC =body-cathexis and IMI =importance of meeting the ideal body image. Clothing benefits sought includes fashion image, figure flaws compensation, sex appeal, self-

improvement, and individuality. Clothing behavior includes fashion innovativeness, in-store shopping interest, and catalog shopping. Other specific dimensions of clothing behavior (e.g., clothing preference for waist emphasis) was excluded as a result of using body-cathexis for the whole body area together.

In addition to testing the presence of interaction effect, multiple regression was used to investigate the specific interaction effect between body-cathexis and IMI. The specific interaction analysis was performed for the selected dependent variable only and will be discussed later.

H2: To test the presence of moderating effects of clothing attitude, the hypotheses were formulated as shown below.

Clothing benefits sought (dependent v) = BC BC*CA (independent vs)

Clothing behavior (dependent v) = BC BC*CA (independent vs), when BC=body-cathexis and CA=clothing attitude. In addition to testing the presence of interaction effect, multiple regression was used to investigate the specific interaction effect between body-cathexis and CA. The specific interaction analysis was performed for the selected dependent variable only and will be discussed later.

Results.

Moderating effects of IMI: The regression coefficients, t-values, and R^2 are presented in Table 38. The table showed that, for all dependent variables, interaction effects of body-cathexis and IMI are significant.

Table 38: Regression coefficients and t-values for the interaction effects of body-cathexis and IMI

dependent v independent v		FI	FC	SA	SI	ID	FIN	ISI	CS
BC	regression coefficient	-0.026	-0.076	-0.046	-0.081	-0.0059	-0.022	-0.0048	0.037
	t-value	-2.23*	-6.24***	-3.72**	-6.69***	-0.49	-1.81	-0.37	2.29*
BC*IMI	regression coefficient	0.00045	0.00039	0.00058	0.00077	0.00033	0.00046	0.00041	-0.00037
	t-value	4.78***	4.05***	5.90***	8.09***	3.66**	4.82***	3.99***	-2.91**
R ²		0.13	0.19	0.17	0.28	0.12	0.15	0.15	0.05

Note. *** p<0.001, ** p<0.01, and * p<0.05

- BC=body-cathexis
- IMI=importance of meeting the ideal body image
- FI=fashion image
- FC=figure flaws compensation
- SA=sex appeal
- SI=self-improvement
- ID=identity
- FIN=fashion innovativeness
- ISI=in-store shopping interest
- CS=catalog shopping

Table 39: Regression coefficients and t-values for the interaction effects of body-cathexis and CA

dependent v independent v		FI	FC	SA	SI	ID	FIN	ISI	CS
BC	regression coefficient	-0.093	-0.128	-0.102	-0.154	-0.0382	-0.0817	-0.0772	0.0632
	t-value	-6.31***	-8.08***	-6.36***	-10.25***	-2.43*	-5.19***	-4.76***	2.87**
BC*CA	regression coefficient	0.0049	0.0040	0.0050	0.0066	0.0029	0.0047	0.0051	-0.0027
	t-value	8.44***	6.39***	7.85***	11.09***	4.65***	7.52***	7.85***	-3.17**
R ²		0.30	0.28	0.26	0.42	0.16	0.27	0.31	0.05

Note. *** $p < 0.0001$, ** $p < 0.01$, and * $p < 0.05$

BC=body-cathexis
CA=clothing attitude
FI=fashion image
FC=figure flaws compensation
SA=sex appeal
SI=self-improvement
ID=individuality
FIN=fashion innovativeness
ISI=in-store shopping interest
CS=catalog shopping

Moderating effects of CA: The regression coefficients, t-values, and R^2 are presented in Table 39. The table showed that, for all dependent variables, interaction effects of body-cathexis and clothing attitude are significant.

For the discussion and interpretation of the results, figure flaws compensation, a dimension of clothing benefits sought, was selected as a dependent variable for the interaction effects of IMI and body-cathexis. There have been few previous studies dealt with clothing benefits sought in relation to body-cathexis. For the moderating effects of clothing attitude, fashion innovativeness was selected. Several researchers (e.g., Shim et al., 1991) suggested the interaction effects of body-cathexis and clothing attitude on clothing behavior (e.g., fashion innovativeness).

Discussion. For the discussion and interpretation of the results, figure flaws compensation was selected for the moderating effects of IMI. In regard to the moderating effects of clothing attitude, fashion innovativeness was selected. Before discussing the specific effects of two moderators, the statistical analysis dealing the interaction effects in multiple regression will be discussed.

There are three questions to be addressed in the analysis of interaction effects: (1) Is there an interaction effect; (2) if so, what is the strength of the effect; and (3) if so, what is the nature of the effect? (Jaccard, Turrisi, & Wan, 1990) The first question, the presence of an interaction effect, can be evaluated by a t-test of the regression coefficient for the interaction. If the t-test yields a statistically significant result, this suggests the

presence of an interaction effect. The second question, the strength of the interaction effect, can be evaluated by the difference in R^2 for the “main-effect only” model and the interactive model. The higher the difference between two R^2 , the stronger the interaction effect is (Jaccard et al., 1990).

If an interaction effect is statistically significant, it is of interest to specify the nature of the interaction. The nature of the relationship can be evaluated by examination of regression coefficient for the interaction. For example, y (dependent variable) is a function of X_1 and $X_1 * X_2$. Let b_1 = regression coefficient for X_1 and b_2 = regression coefficient for $X_1 * X_2$. The equation for the variables could be stated as below.

$$y = a + b_1 X_1 + b_2 X_1 * X_2$$

In this equation, b_2 (regression coefficient for the interaction between X_1 and X_2) indicates the number of units that the slope of y on X_1 changes, given a one-unit change in X_2 . The evaluation of the moderating effect of X_2 on the relationship between X_1 and y begins by specifying a value of X_2 . Let us begin with the lowest score possible on X_2 , namely a value of 1. Using above equation, we substitute the score of 1 whatever X_2 occurs. This yields,

$$y = a + b_1 X_1 + b_2 X_1(1) = a + b_1 X_1 + b_2 X_1 = a + (b_1 + b_2)X_1$$

Therefore, when the moderator X_2 equals 1, the slope of y on X_1 equals $b_1 + b_2$. By using different values of X_2 (the moderator), we can perform the same calculations, yielding different slopes of y on X_1 . These calculations reveal how the relationship between y and X_1 varies over the range of X_2 . It may be questionable which values of X_2 should be used

One reasonable strategy is to evaluate the effects of X_1 on y at “low,” “medium,” and “high” values of X_2 , where “low” might be defined as one standard deviation below the mean X_2 score, “medium” as the mean, and “high” as one standard deviation above the mean (Jaccard et al., 1990).

After we compute the slopes of y on X_1 at low, medium, and high values of X_2 , it is possible to test the statistical significance of the slopes, testing whether the slopes differ from zero. The test of the slope at a given value of X_2 takes the form of a t-test, such that

$$t = \text{the slope at } X_2 / \text{standard error of the slope at } X_2$$

where X_2 is the value of X_2 at which the effects of X_1 on y are to be tested (Jaccard et al., 1990). By using all the information mentioned above, the nature of moderating effects of IMI and clothing attitude are evaluated

Moderating effects of IMI

The moderating effect of IMI on the relationship between body-cathexis and figure flaws compensation was evaluated based on three basic questions concerning the presence, strength, and nature of the interaction effect. Table 40 presents the result of multiple regression analysis for the interaction effect. The R-square for the interaction model was 0.19 and the regression equation was

$$y = 14.314 - 0.076 X_1 + 0.000387 X_1 * X_2$$

when y =figure flaws compensation, X_1 =BC, and X_2 =IMI.

Table 40: The multiple regression analysis for the moderating effect of IMI

Analysis of variance

Source	DF	Sum of squares	Mean square	F value	Prob>F
Model	2	164.845	82.422	19.805	0.0001
Error	174	724.148	4.161		
C Total	176	888.994			
R-square		0.1854		Adj R-sq	0.176

Parameter estimates

Variable	Parameter estimate	t-value	Standardized estimate
intercept	14.314	19.725***	0.000
BC	-0.0761	-6.240***	-0.632
BC*IMI	0.000387	4.052***	0.410

Note. *** $p < 0.001$

1) The presence of the interaction effect

A t-test of the regression coefficient for the interaction yields a statistically significant result ($t=4.05$, $p < 0.001$). This suggests the presence of an interaction effect.

2) The strength of the interaction effect

The strength of the effect is indexed by the difference in R-square for the “main-effect only” model and the interactive model. For the former, the R-square was 0.10, and for the later it was 0.19. This yields $0.19 - 0.10 = 0.09$. The interaction effect accounts for 9% of the variance in figure flaws compensation.

3) The nature of the interaction effect

To examine the nature of the interaction effect, IMI (X_2) was used as a moderator variable. The regression coefficient for the interaction indicates how the relationship between body-cathexis and figure flaws compensation varies across IMI. For every unit that IMI changes, the slope of figure flaws compensation on body-cathexis changes 0.000387 units. Let a “low” IMI score be defined as one standard deviation below the mean, a “medium” as the mean, and “high” as one standard deviation above the mean. The mean for IMI is 97.63 and the standard deviation on IMI is 17.42. Thus, the “low,” “medium,” and “high” IMI scores are 80.21, 97.63, and 115.05, respectively. Using these values, we can calculate the slopes for the case of the low IMI, the medium IMI, and the high IMI.

$$\text{the slope at “low” IMI } (X_2=80.21) = -0.076 + (0.000387)(80.21) = -0.045$$

$$\text{the slope at “medium” IMI } (X_2=97.63) = -0.076 + (0.000387)(97.63) = -0.038$$

$$\text{the slope at “high” IMI } (X_2=115.05) = -0.076 + (0.000387)(115.05) = -0.031$$

The t ratios for the low, medium, and high IMI values are computed by dividing the slopes by their standard errors. The results can be summarized in Table 41.

Table 41: t ratios for the low, medium, and high IMI

IMI Level	slope	standard error	t ratio (df=174)
Low	-0.045	0.01693	2.66**
Medium	-0.038	0.01780	2.13*
High	-0.031	0.01860	1.67

Note. ** $p < 0.01$ and * $p < 0.05$

The t-ratios for the low and medium IMI values were statistically significant, indicating that the two slopes differ from zero. At low levels of IMI, for one unit that body satisfaction increases, figure flaws compensation decreases 0.045 units. At medium levels of IMI, for one unit that body-cathexis increases, figure flaws compensation decreases 0.038 units. The t-ratio for the high IMI value was not statistically significant, indicating that the effect of body-cathexis on figure flaws compensation was not significant in the case of high IMI.

The differences among the slopes due to the variations in IMI can be illustrated graphically. In Figure 9, as the level of IMI increases, the slope of figure flaws

compensation on body-cathexis flattens, indicating that the effect of body-cathexis on figure flaws compensation becomes weaker. In the case of low IMI, there was a strong negative relationship between body-cathexis and figure flaws compensation; the more the subjects were dissatisfied with their bodies, the more they pursued figure flaws compensation through clothing. However, as the levels of IMI become higher, the negative relationship between body-cathexis and figure flaws compensation becomes weaker. In case of high IMI, even the subjects who were satisfied with their bodies tried to pursue figure flaws compensation through clothing.

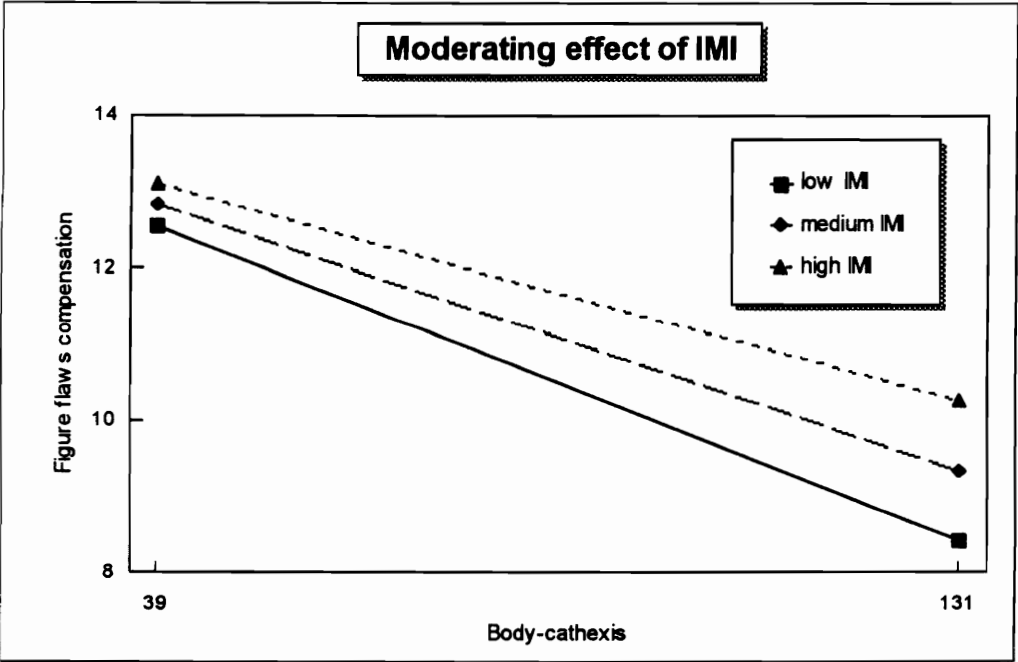


Figure 9: Moderating effect of IMI

The moderating effect of IMI may be understood through the theory of symbolic self-completion. In case of low level of IMI, there was a significant inverse relationship between body-cathexis and the use of clothing to compensate for figure flaws, because dissatisfaction with body may give a sense of incompleteness. The subjects who are satisfied with their bodies may not use clothing as a means for figure flaws compensation, when meeting the ideal body image is not important to them. However, as the level of IMI increases, the subjects who are satisfied with their bodies may become concerned about using a clothing to compensate for figure flaws. The tension state of incompleteness may arise if meeting the ideal body image becomes important. To reduce the tension state or to reach their ideal body image, they may seek figure flaws compensation through clothing.

The finding of the study showed that the relationship between body-cathexis and figure flaws compensation varies across the levels of IMI. As the level of IMI increases, the negative relationship becomes weaker. In addition, using Figure 9, an intuitive level of interpretation and discussion may be possible. It seems that the moderating effect of IMI became to play a more important role as the subjects' body satisfaction increased. When the subjects were dissatisfied with their bodies, the influence of IMI did not seem strong. Regardless of IMI, they pursued figure flaws compensation through clothing. However, as the subjects became satisfied with their bodies, IMI seemed to play an important role in their figure flaws compensation through clothing. In case of low level of IMI, they may be less care about clothing as a means for figure flaws compensation. However, in case of

high level of IMI, they may be concerned about meeting the ideal body image and seek the clothing benefit to reach an ideal body image.

Moderating effects of clothing attitude

The moderating effect of clothing attitude on the relationship between body-cathexis and fashion innovativeness was evaluated based on three basic questions concerning the presence, strength, and nature of the interaction effect. Table 42 presents the result of multiple regression analysis for the interaction effect. The R-square for the interaction model was 0.27 and the regression equation was

$$y = 10.133 - 0.0817 X_1 + 0.0047 X_1 * X_2$$

when y =fashion innovativeness, X_1 =body-cathexis, and X_2 =clothing attitude.

1) The presence of the interaction effect

A t-test of the regression coefficient for the interaction yields a statistically significant result ($t=7.526$, $p<0.001$). This suggests the presence of an interaction effect.

2) The strength of the interaction effect

The strength of the effect is indexed by the difference in R-square for the “main-effect only” model and the interactive model. For the former, the R-square was 0.03, and

for the later it was 0.27. This yields $0.27 - 0.03 = 0.24$. The interaction effect accounts for 24% of the variance in fashion innovativeness.

Table 42: The multiple regression analysis for the moderating effect of clothing attitude

Analysis of variance

Source	DF	Sum of squares	Mean square	F value	Prob>F
Model	2	234.305	117.152	32.244	0.0001
Error	174	632.203	3.633		
C Total	176	866.508			
R-square		0.270	Adj R-sq		0.262

Parameter estimates

Variable	Parameter estimate	t-value	Standardized estimate
intercept	10.132	14.74***	0.000
BC	-0.0817	-5.193***	-0.687
BC*CA	0.00470	7.526***	0.996

Note. *** $p < 0.001$

3) The nature of the interaction effect

To examine the nature of the interaction effect, clothing attitude (X_2) was used as a moderator variable. The regression coefficient for the interaction indicates how the relationship between body-cathexis and fashion innovativeness varies across clothing

attitude. For every unit that clothing attitude changes, the slope of fashion innovativeness on body-cathexis changes 0.0047 units. Let a “low” clothing attitude score be defined as one standard deviation below the mean, a “medium” as the mean, and “high” as one standard deviation above the mean. The mean for clothing attitude is 19.694 and the standard deviation on clothing attitude is 2.667. Thus, the “low,” “medium,” and “high” clothing attitude scores are 17.027, 19.694, and 22.361, respectively. Using these values, we can calculate the slopes for the case of the low, medium, and high clothing attitude (CA).

$$\text{the slope at "low" CA } (X_2=17.027) = -0.0817 + (0.0047)(17.027) = -0.0017$$

$$\text{the slope at "medium" CA } (X_2=19.694) = -0.0817 + (0.0047)(19.694) = 0.011$$

$$\text{the slope at "high" CA } (X_2=22.361) = -0.0817 + (0.0047)(22.361) = 0.105$$

The t ratios for the low, medium, and high clothing attitude values are computed by dividing the slopes by their standard errors. The results can be summarized in Table 43.

The t-ratio for the high clothing attitude value was statistically significant, indicating that the slope differs from zero. At high level of clothing attitude, for one unit that body satisfaction increases, fashion innovativeness increases 0.105 units. The t-ratios for the low and medium clothing attitude values were not statistically significant, indicating that the effect of body-cathexis on fashion innovativeness was not significant in the case of low and medium IMI.

Table 43: t ratios for the low, medium, and high clothing attitude

CA Level	slope	standard error	t ratio (df=174)
Low	-0.0017	0.0231	0.07
Medium	0.011	0.0241	0.46
High	0.105	0.0250	4.20**

Note. ** $p < 0.01$

The differences among the slopes due to the variations in clothing attitude can be illustrated graphically. In Figure 10, as the level of clothing attitude increases, the slope of fashion innovativeness on body-cathexis increases, indicating that the effect of body-cathexis on fashion innovation becomes stronger. In case of low CA, the relationship between body-cathexis and fashion innovation was not significant. However, as the levels of clothing attitude increased, the relationship between body-cathexis and fashion innovativeness became stronger. In case of high CA, the effect of body-cathexis on fashion innovativeness was significant; the more the subjects were satisfied with their bodies, the more they try new things and fashions in clothing.

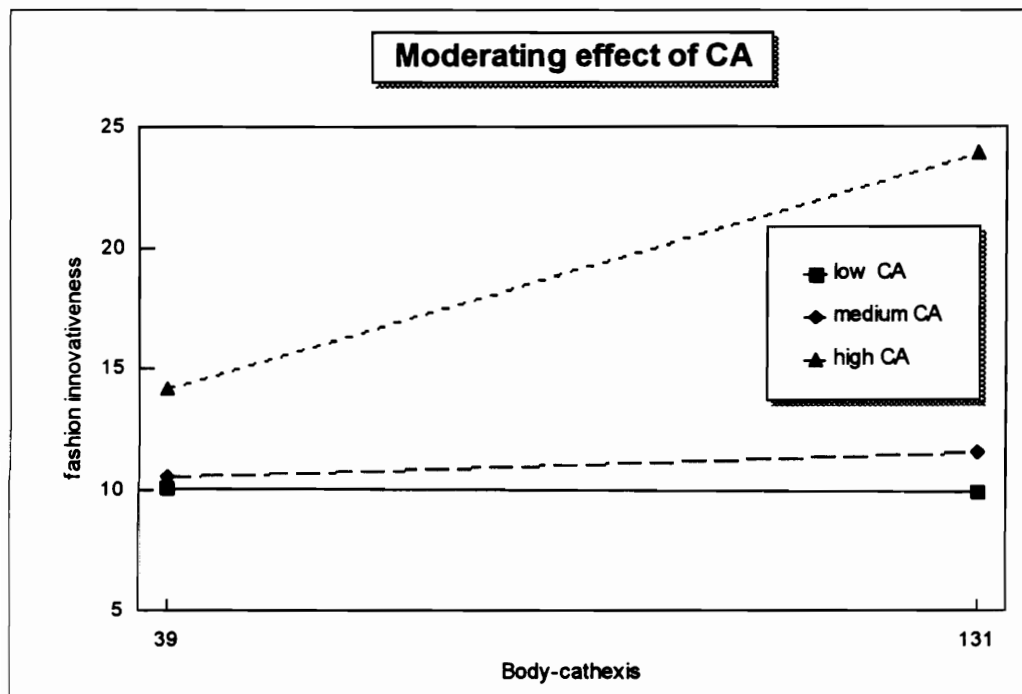


Figure 10: Moderating effects of clothing attitude

The finding of the study showed that the relationship between body-cathexis and fashion innovativeness varies across the levels of clothing attitude. As the levels of clothing attitude increase, the relationship becomes stronger. In case of low level of CA, subjects had a lower degree of fashion innovativeness, no matter how they were satisfied with their bodies. Even the subjects who are satisfied with their bodies may not try new fashions in clothing if they do not consider clothing as an important means in social interactions. Although clothing is an important symbolic means in social interactions, other possible means exist in relation to body image (e.g., new fashions in tattoos).

However, in case of high level of CA, the strong relationship between body-cathexis and fashion innovativeness existed. When individuals have a favorable attitude toward clothing, they are likely to try new things and fashions in clothing in relation to their body image. As their body satisfaction increases, their self-confidence may increase, which results in higher degree of trying new clothing fashions.

The finding has theoretical implications and contributes to the literature. Several researchers have suggested that the relationship between body satisfaction and clothing attitude/clothing interest may not be uni-dimensional and that more research was needed to clarify these relationships (Damhorst & Littrell, 1984; Davis, 1985; Kaiser, 1990; Shim, Kotsiopulos, & Knoll, 1991). Also, conflicting findings exist in regard to the relationship between body-cathexis and clothing behavior. Some studies (e.g., Hwang, 1993) found a significant relationship, but others (e.g., Davis, 1985) found no relationships. The finding of this study shows that IMI and clothing attitude are important moderators on the relationship between body-cathexis and clothing behavior. A higher degree of body satisfaction does not always result in a higher degree of clothing behavior. The relationship varies across levels of IMI and clothing attitude.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

An understanding of self-concept is important for marketers because much product consumption is influenced by consumers' individual self-images. Body image, one of the most important components of self-concept, is the mental view one has of one's body. Today, dissatisfaction with body image appears to be widespread and has such side effects as a decrease in self-satisfaction and flourishing diet industries.

When people are not satisfied with certain aspects of self (body image), the roles of products (clothing) as symbols and means in social interactions cannot be underestimated. However, few theoretical explanations have existed previously on why clothing can compensate for body dissatisfaction and on what clothing benefits are sought in relation to body satisfaction. Very limited studies exist on the relationships between satisfaction with different body areas and clothing behavior. Moreover, conflicting findings in previous analyses exist in regard to the relationships between body satisfaction and dimensions of clothing behavior.

A premise of the research reported here was that importance of meeting the ideal body image may underlie the conflicting findings found previously and how consumers seek clothing benefits in relation to body satisfaction. However, almost no research has concerned the influence of importance of meeting the ideal body image on the relationships between body satisfaction and clothing benefits sought/ clothing behavior. Research on the relationships

between satisfaction with different body areas and clothing benefits sought/ clothing behavior may show complex consumer motivations in clothing behavior and provide a basis for marketers on how to segment and target consumers and make plans (e.g., in clothing design) for them. Research on the importance of meeting the ideal body image has implications for symbolic consumption studies in explaining why some consumers are motivated to enhance their self-image through symbolic consumption but why others are not.

The purpose of this study was to determine, for female college students, 1) the effects of body-cathexis on clothing benefits sought and selected dimensions of clothing behavior and 2) the effects of importance of meeting the ideal body image on clothing benefits sought and clothing behavior.

Research hypotheses were formulated based on the models of specific relationships between five areas of body-cathexis, five dimensions of clothing benefits sought, and four dimensions of clothing behavior. Hypotheses 1 and 2 dealt with the effects of body-cathexis on clothing benefits sought, clothing attitude, and clothing behavior. Hypotheses 3 and 4 examined the effects of importance of meeting the ideal body image and body-cathexis on clothing benefits sought, clothing attitude, and clothing behavior. Theories and reasoning were provided to explain each hypothesis.

Subjects of the study were 177 female college students, aged 18 to 25, at Virginia Tech. To measure the variables, an instrument was developed from previous studies. Body-cathexis and importance of meeting the ideal body image consisted of five areas of body parts: head/upper body, lower body, height, weight, and torso. Clothing benefits sought had five

dimensions: fashion image, figure flaws compensation, sex appeal, self-improvement, and individuality. Clothing attitude was modified from the Shim et al. (1991) study. Clothing behavior consisted of clothing preferences for fit/color/style/emphasis, satisfaction with the fit and variety in ready-to-wear, fashion innovativeness, and shopping behavior. The reliability of scales in the instrument was checked by Cronbach coefficient alpha, and showed good reliability.

Mean values and standard deviations were reported. Generally, subjects have higher scores for importance of meeting the ideal body image than for body-cathexis for the four areas of body parts. It implies that many female college students have some degree of dissatisfaction with their bodies and that they consider meeting the ideal body image important. In regard to ready-to-wear, the subjects are generally more satisfied with the fit at bust and neck than at thighs, hips, and waist in ready-to-wear clothing. It implies that they have problems with the fit at areas related weight in ready-to-wear, and this may be due to their low body-cathexis score for weight and high importance of meeting the ideal body image for weight. In regard to shopping behavior, the female college students in the sample demonstrated a higher degree of liking and enjoying in-store shopping for clothing than willingness to buy clothes by catalog; they may not be a good target in the catalog market. In addition to means and standard deviations, correlations between body-cathexis and importance of meeting the ideal body image were calculated. The results show that body-cathexis variables are correlated and that importance of meeting the ideal body image variables are correlated. However, the majority of

correlations between body-cathexis and importance of meeting the ideal body image are not significant.

Hypothesis 1 dealt with the influence of body-cathexis on clothing benefits sought. Statistical data analysis was done by multiple regression and Pearson correlation coefficient. Generally, there are relationships between clothing benefits sought and body-cathexis for specific areas of body parts. Fashion image, sex appeal, and self-improvement are related to body-cathexis for head/upper body only. The more satisfied one is with the head/upper body, the more she will pursue the fashion image, sex appeal, and self-improvement benefits sought from clothing. Individuality is related to body-cathexis for weight. The more satisfied one is with her weight area, the more she will pursue the individuality benefit sought from clothing. Figure flaws compensation is only clothing benefit sought which is related to body-cathexis for three areas. The less satisfied one is with the lower body, weight, and torso, the more she will pursue the figure flaws compensation benefit from clothing. Weight area is the most significant predictor of the figure flaws compensation benefit sought. Symbolic self-completion theory provides a possible explanation of the relationship between body-cathexis and figure flaws compensation.

The findings have theoretical implications by showing that consumers' clothing benefits sought are related to their body satisfaction. Few previous studies have dealt with the kinds of clothing benefits consumers seek in relation to their body satisfaction. Also, the findings imply that body satisfaction with all five areas could not explain all five dimensions of clothing

benefits sought. Satisfaction with specific body areas partially explained the specific dimensions of clothing benefits sought in this research.

Hypothesis 2 dealt with the relationships of body-cathexis to clothing attitude and clothing behavior. Pearson correlation coefficients and multiple regression were used to test H2. In regard to the influences of body-cathexis on clothing attitude, the results of multiple regression showed that body-cathexis for head/upper body was the only significant predictor of clothing attitude. Body-cathexis for lower body, height, and weight were not related to clothing attitude in this research. The findings have theoretical implications.

The relationship between clothing attitude and body-cathexis for specific body areas in the study contributes to the literature regarding the relationships between the two variables. There have been conflicting findings about the relationship between clothing attitude and body-cathexis. The possible reason for the conflicting findings may be that previous studies only concerned body-cathexis for the whole body areas together; they did not concern body-cathexis for specific body areas. Kaiser (1990) suggested that the relationship between body satisfaction and clothing attitude/clothing interest may not be uni-dimensional and that more research was needed to clarify these relationships, based on the research of Damhorst and Littrell (1984) and Davis (1985). Shim, Kotsiopulos, and Knoll (1991) also suggested that body-cathexis and clothing attitude relationships may not be uni-dimensional; however, the relationship between body-cathexis and clothing attitude in their study was not clear since they did not measure the relationship.

In regard to the relationships of body-cathexis to clothing preferences, the results generally showed positive relationships between body-cathexis for the specific body areas and clothing preferences for styles, colors, fit, and body-area emphasis. The theory of reasoned action may explain the relationships. Specifically, body satisfaction with weight area is the most significant predictor of clothing preference for sexy styles, and it is related to clothing preference for waist and hip emphasis; clothing preference for tight fit; and clothing preference for bright colors. Body satisfaction for lower body and height areas is related to clothing preference for leg emphasis. Body satisfaction with torso area is related to clothing preference for tight fit. The findings have implications for design; the relationships of body satisfaction to clothing preferences should be incorporated when designing. For example, designers should be concerned that clothing preference for bright colors, tight fit, and waist and hip emphasis are related to weight satisfaction. If they target the consumers who are satisfied with their weight, the clothing needs to incorporate the above design characteristics.

In regard to satisfaction with ready-to-wear clothing, the results showed positive relationships between body-cathexis for specific body areas and satisfaction with the aspect of ready-to-wear clothing which is related to the area. Specifically, satisfaction with pant length in ready-to-wear is related to body satisfaction for lower body and height areas. Satisfaction with the fit at thighs, hips, and waist is related to body satisfaction with weight area. Satisfaction with the fit at bust and neckline is related to body satisfaction for torso area. Satisfaction with the variety in ready-to-wear is related to body satisfaction for height and weight areas. Symbolic interaction theory and social comparison theory provided an explanation for the

finding. When people are trying ready-to-wear clothing, the comparison of their body image to the current ideal body image which is reflected in ready-to-wear clothing may be inevitable. If individuals are satisfied with their body areas, they may respond to ready-to-wear clothing with satisfaction.

For in-store shopping interest, the results showed that body-cathexis for head/upper body was a significant predictor of in-store shopping interest. The results also showed that catalog shopping is negatively related to body-cathexis for head/upper body and positively related to body-cathexis for torso. The more one is satisfied with her head/upper body, the less she may be involved in catalog shopping because catalog shopping may not provide diverse benefits and proper clothing which are essential to maintain her satisfaction with head/upper body. However, the more one is satisfied with her torso, the more she may be involved in catalog shopping. This may imply that catalog retailers should be concerned about targeting consumers who are satisfied with their torso. Focusing on underwear items (e.g., bras) which are related to torso area of body parts may be appropriate for catalog retailers.

In regard to fashion innovativeness, the results showed that body-cathexis for head/upper body is the only significant predictor of fashion innovativeness. The more satisfied one is with her head/upper body, the higher the degree of fashion innovativeness. Since fashion innovativeness requires some individuality and feeling of security (Kaiser, 1990), one's satisfaction with head/upper body may provide feelings of security, which leads to fashion innovativeness. However, body-cathexis for other body areas are not related to fashion innovativeness in this study. This may imply that satisfaction with all five body areas cannot

explain complex clothing behavior (e.g., fashion innovativeness); satisfaction with specific body areas (e.g., head/upper body) can partially explain fashion innovativeness. To explain complex clothing behavior problems, a different approach (e.g., investigation of the effect of importance of meeting the ideal body image on clothing behavior) may be needed. The following hypotheses dealt with this issue.

Hypothesis 3 dealt with the effects of importance of meeting the ideal body image and body-cathexis on clothing benefits sought. Multiple regression and Pearson correlation coefficients were used to test H3. The results showed that the inclusion of importance of meeting the ideal body image to the relationships between each clothing benefit sought and body-cathexis significantly improved R^2 in the regression model. The t-values and standardized regression coefficients in the multiple regression showed the relative importance of independent variables (body-cathexis and importance of meeting the ideal body image) on each clothing benefit sought. Among the clothing benefits sought, fashion image, sex appeal, and figure flaws compensation were predicted by both body-cathexis and importance of meeting the ideal body image. However, self-improvement was predicted by importance of meeting the ideal body image only. The relative influence of importance of meeting the ideal body image on self-improvement was stronger than was that of body-cathexis. Individuality was the only benefit sought which was influenced by body-cathexis only. The effect of body-cathexis may be stronger than that of importance of meeting the ideal body image in the case of individuality.

In addition, Pearson correlation coefficients showed the relationships of independent variables (body-cathexis and importance of meeting the ideal body image) to the dependent

variables (clothing benefits sought). The results showed the significant relationships of importance of meeting the ideal body image for four areas to fashion image and sex appeal, and for all five areas to self-improvement. While body-cathexis for one body area was related only to these benefits sought, importance of meeting the ideal body image for four areas are related to the benefits sought. This may imply that importance of meeting the ideal body image is a more important predictor of fashion image, sex appeal, and self-improvement benefits sought than is body-cathexis. Also, the coefficients showed that importance of meeting the ideal body image was important in figure flaws compensation and individuality. Figure flaws compensation and individuality were related to both body-cathexis and importance of meeting the ideal body image. The contributions of those two variables to both of the benefits sought were similar.

The findings have theoretical implications. Through the self-esteem motive, consumers seek clothing benefits when they consider meeting the ideal body image important. The new variable, importance of meeting the ideal body image, may contribute to the literature on symbolic consumption in consumer behavior since almost no previous studies had dealt with importance of meeting the ideal body image in clothing behavior. As discussed in the results of the previous hypothesis, body-cathexis alone may not explain complicated clothing benefits sought of consumers. The finding of the study implied that importance of meeting the ideal body image is an important variable in explaining clothing benefits sought.

Hypothesis 4 dealt with the effects of importance of meeting the ideal body image and body-cathexis on clothing attitude and clothing behavior. Multiple regression and Pearson

correlation coefficients were used to test H4. In regard to clothing attitude, the results showed that importance of meeting the ideal body image is a very important indicator in clothing attitude. T-values showed that body-cathexis for head/upper body and importance of meeting the ideal body image for head/upper body, lower body, and weight were significant predictors of clothing attitude. Importance of meeting the ideal body image for weight was the most important predictor of clothing attitude. Also, Pearson correlation coefficients showed that importance of meeting the ideal body image for four areas were significantly related to clothing attitude. While body-cathexis for head/upper is related only to clothing attitude, importance of meeting the ideal body image for four areas are related to clothing attitude. This may imply that clothing attitude is explained better by importance of meeting the ideal body image than by body-cathexis.

The finding has theoretical implications and contributes to the literature. Several researchers have suggested that the relationship between body satisfaction and clothing attitude/clothing interest may not be uni-dimensional and that more research was needed to clarify these relationships (Damhorst & Littrell, 1984; Davis, 1985; Kaiser, 1990; Shim, Kotsiopulos, & Knoll, 1991). The finding of this study shows that importance of meeting the ideal body image is significantly related to clothing attitude, and that body-cathexis for only specific areas of body parts (e.g., head/upper body) can partially explain clothing attitude.

When it comes to satisfaction with the ready-to-wear, the results showed that satisfaction with the majority of aspects in ready-to-wear was better explained by body-cathexis than by importance of meeting the ideal body image. Therefore, the findings imply that,

generally, consumers' satisfaction with specific body areas is a more important predictor of their satisfaction with ready-to-wear than is importance of meeting the ideal body image.

In regard to in-store shopping interest, the results showed that both body-cathexis and importance of meeting the ideal body image are important predictors of in-store shopping interest. Also, catalog shopping was predicted by both body-cathexis and importance of meeting the ideal body image. Pearson correlation coefficients showed negative relationships between catalog shopping and importance of meeting the ideal body image for four areas. It implies that, through self-esteem motive, consumers may avoid catalog shopping if they consider meeting the ideal body image important.

In the results for fashion innovativeness, importance of meeting the ideal body image was an important predictor of fashion innovativeness. While body-cathexis for head/upper body was only related to fashion innovativeness, importance of meeting the ideal body image for all five areas were related to fashion innovativeness. This may imply that fashion innovativeness is explained better by importance of meeting the ideal body image than by body-cathexis. Self-esteem motive may explain the effects of importance of meeting the ideal body image on fashion innovativeness. Through self-esteem motive, consumers tend to try new clothing fashions to reduce the gap between actual and ideal image if meeting the ideal body image is important to them. They may try new fashions and things in clothing to enhance their body image and to make their bodies look like the ideal.

Overall, this study showed the effects of body-cathexis for specific areas of body parts and importance of meeting the ideal body image on each dimension of clothing benefits sought,

clothing attitude, and dimensions of clothing behavior. Body-cathexis was an important predictor of some dimensions of clothing benefits sought (e.g., figure flaws compensation, individuality) and some dimensions of clothing behavior (e.g., clothing preference, satisfaction with ready-to-wear). However, body-cathexis alone could not explain other complex clothing benefits sought and clothing behavior. To explain complex clothing behavior problems, the effect of importance of meeting the ideal body image was investigated. The results showed that importance of meeting the ideal body image was an important predictor of all dimensions of clothing benefits sought, especially in self-improvement, fashion image, and sex appeal. Also, importance of meeting the ideal body image was an important predictor of clothing attitude and dimensions of clothing behavior (e.g., fashion innovativeness, shopping behavior).

The relationship between body-cathexis and clothing benefits sought/clothing behavior was further analyzed by a post-hoc analysis. The reasons for the post-hoc analysis came from the results of previous analysis and literature. In the post-hoc analysis, moderating effects of IMI (importance of meeting the ideal body image) and clothing attitude were investigated, and followings were presented: alternative model for the moderating effects, hypotheses, statistical analyses, results, and interpretation of the results. Based on the results of a factor analysis, body-cathexis and IMI for the whole body area together was used. For the moderating effects of IMI and clothing attitude, research hypotheses were formulated. Hypothesis 1 dealt with the interaction effects of body-cathexis and IMI on clothing

benefits sought and clothing behavior. Hypothesis 2 dealt with the interaction effects of body-cathexis and clothing attitude on clothing benefits sought and clothing behavior. Multiple regression was used to test the hypotheses and to investigate the specific interaction effects.

The results showed that, for all dependent variables, interaction effects of body-cathexis and IMI were significant. The relationship between body-cathexis and clothing benefits sought (clothing behavior) was moderated by IMI. Also, for all dependent variables, interaction effects of body-cathexis and clothing attitude were significant. The relationship between body-cathexis and clothing benefits sought (clothing behavior) was moderated by CA. For the discussion and interpretation of the results, figure flaws compensation, a dimension of clothing benefits sought, was selected as a dependent variable for the interaction effects of IMI and body-cathexis. For the moderating effects of clothing attitude, fashion innovativeness was selected.

Before discussing the specific effects of two moderators, the statistical analysis dealing the interaction effects in multiple regression was discussed. The moderating effect of IMI on the relationship between body-cathexis and figure flaws compensation was evaluated based on three basic questions concerning the presence, strength, and nature of the interaction effect. The results showed that, as the level of IMI increases, the slope of figure flaws compensation on body-cathexis flattens, indicating that the effect of body-cathexis on figure flaws compensation becomes weaker. In the case of low IMI, there was a strong negative relationship between body-cathexis and figure flaws compensation; the

more the subjects were dissatisfied with their bodies, the more they pursued figure flaws compensation through clothing. However, as the levels of IMI become higher, the negative relationship between body-cathexis and figure flaws compensation becomes weaker. In case of high IMI, even the subjects who were satisfied with their bodies tried to pursue figure flaws compensation through clothing. The moderating effect of IMI may be understood through the theory of symbolic self-completion.

The moderating effect of clothing attitude on the relationship between body-cathexis and fashion innovativeness was evaluated based on the three basic questions. The results showed that, as the level of clothing attitude increases, the relationship between body-cathexis and fashion innovativeness becomes stronger. In case of low level of CA, subjects had a lower degree of fashion innovativeness, no matter how they were satisfied with their bodies. However, in case of high level of CA, the strong relationship between body-cathexis and fashion innovativeness existed. When individuals have a favorable attitude toward clothing, they are likely to try new things and fashions in clothing in relation to their body image. As their body satisfaction increases, their self-confidence may increase, which results in higher degree of trying new clothing fashions.

The finding has theoretical implications and contributes to the literature. Several researchers have suggested that the relationship between body satisfaction and clothing attitude/clothing interest may not be uni-dimensional and that more research was needed to clarify these relationships (Damhorst & Littrell, 1984; Davis, 1985; Kaiser, 1990; Shim, Kotsiopoulos, & Knoll, 1991). Also, conflicting findings exist in regard to the relationship

between body-cathexis and clothing behavior. Some studies (e.g., Hwang, 1993) found a significant relationship, but others (e.g., Davis, 1985) found no relationships. The finding of this study shows that IMI and clothing attitude are important moderators on the relationship between body-cathexis and clothing behavior. A higher degree of body satisfaction does not always result in a higher degree of clothing behavior. The relationship varies across levels of IMI and clothing attitude.

Suggestions for future studies

Based on the results and limitations of the study, the following suggestions for further research are proposed:

1. The study has a limitation in that the sample was female college students at Virginia Tech. Although the homogeneity eliminates geographical factors in interpretation of the findings, it may have a generalization problem. Female college students in big cities may have different ideas about body image and clothing behavior. Future research could be expanded to the students in different geographical areas. Also, the study has a limitation in that the part of the subjects were from clothing and textiles classes. Although the clothing and textiles class is an introductory one and the majority of the subjects were from other classes (a human nutrition class and a professional seminar class), it should be noted that the subjects from clothing and textiles classes may have a higher degree of clothing attitude and clothing behavior. This study did not compare the differences between the subjects from clothing and textiles classes and

non-clothing and textiles classes. Future research may need to include more diverse students and to find differences among them. Furthermore, the study only dealt with female subjects. Research on males and other populations may generate useful findings. Comparison of diverse demographic groups may provide further understanding and meaningful information to retailers and apparel manufacturers.

2. This study did not measure actual and ideal body image. The study only dealt with body satisfaction and importance of meeting the ideal body image for various body parts. Therefore, we are not sure what was the subjects' ideal body image; we only could assume that it may be related to current ideal body image in American society. Therefore, future studies need to measure actual and ideal body image, and their relations to body satisfaction and importance of meeting the ideal body image.

3. The study has a limitation in that multicollinearity existed in the regression model for the main effects of importance of meeting the ideal body image and body-cathexis. The multicollinearity is a threat to the interpretation about the influence of each independent variable on the dependent variable. To avoid misinterpretation, more analysis may be needed in future studies. Including or excluding independent variables in the analysis may be one approach. Using body-cathexis and importance of meeting the ideal body image for the whole body area together may be another approach.

4. More study regarding the measurement of body-cathexis, importance of meeting the ideal body image, and clothing benefits sought is needed. This study showed the importance of body-cathexis for specific areas of body parts. However, there have been very

few studies about how to categorize various body parts. Factor analysis may be used in categorization of body parts. More thorough analysis including factor analysis needs to be done for diverse demographic groups. Also, importance of meeting the ideal body image (IMI) needs to be investigated more. The measurements' reliability and validity need to be addressed in other studies and other samples. Further research is needed to investigate if IMI for specific body areas are correlated in other samples. In addition, more study about clothing benefits is needed. This study used five dimensions of clothing benefits sought; the dimensions were modified from other studies. Since there were no clear standards in categorizations of each dimension, more research dealing with measurement of clothing benefits sought may have a contribution in this aspect.

5. The study investigated a moderating effects of IMI and clothing attitude, using body-cathexis and IMI for the whole body area together. The moderating effects may be further analyzed by using body-cathexis and IMI for specific body areas. Also, future research may need to investigate the mediating effects of IMI and clothing attitude on the relationships between body-cathexis and clothing behavior. The research dealing with the mediating effect may clarify the nature of effects of clothing attitude and IMI on the relationships between body-cathexis and clothing behavior.

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Appendix A

Proposed Research Models of Specific Relationships

Figures 11 to 15: The influence of each area of body-cathexis on the dimensions of clothing benefits sought

Figures 16 to 20: The influence of each area of body-cathexis on clothing attitude and clothing behavior

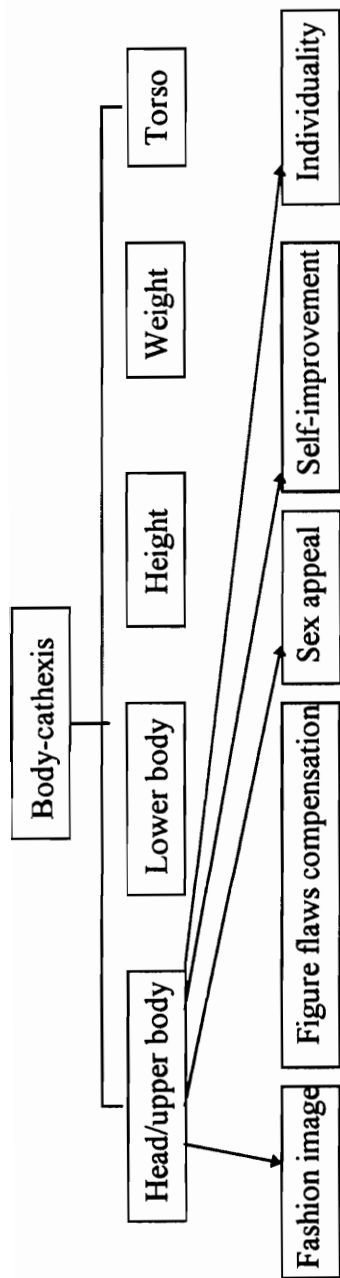


Figure 11: Head/upper body-cathexis and clothing benefits sought

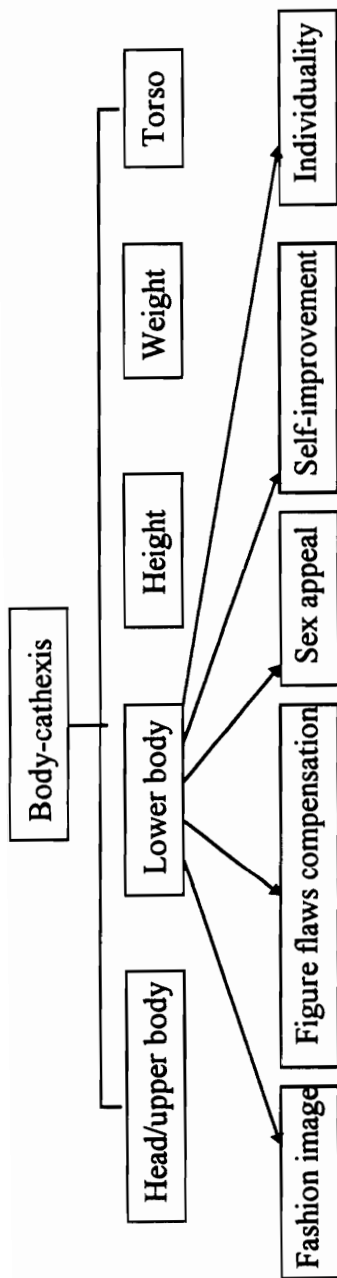


Figure 12: Lower body-cathexis and clothing benefits sought

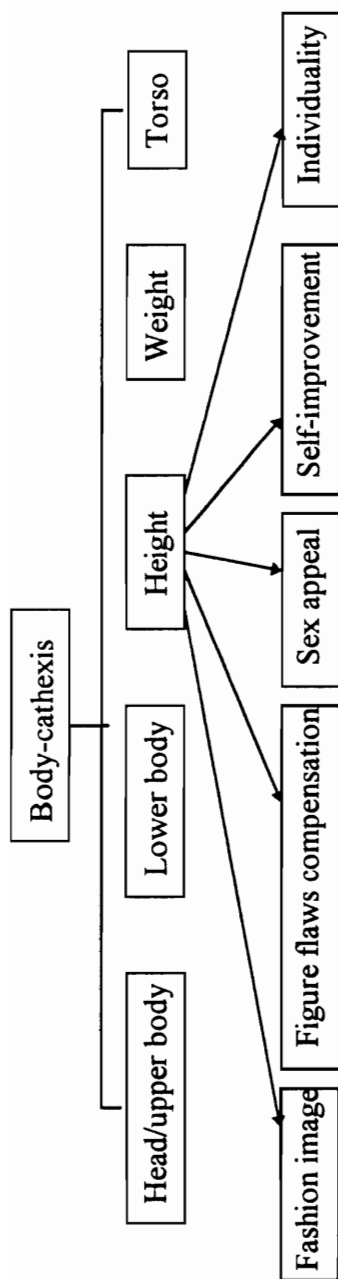


Figure 13 : Height-cathexis and clothing benefits sought

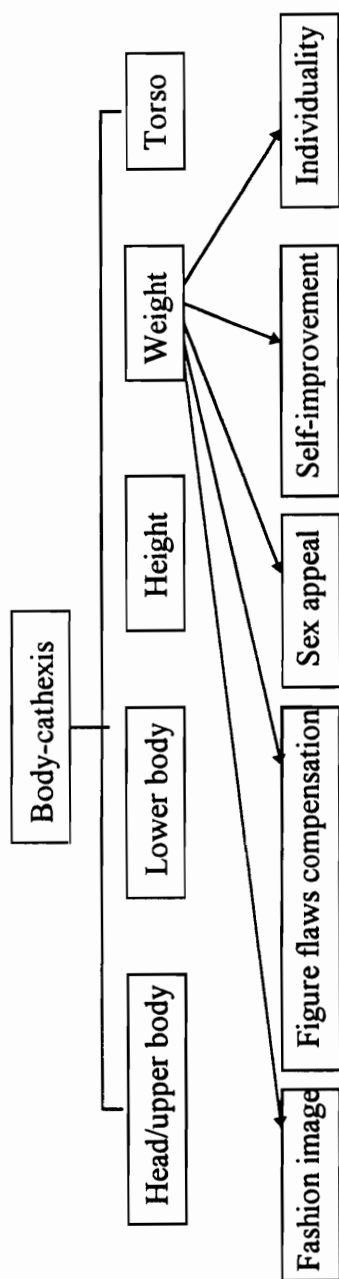


Figure 14: Weight-cathexis and clothing benefits sought

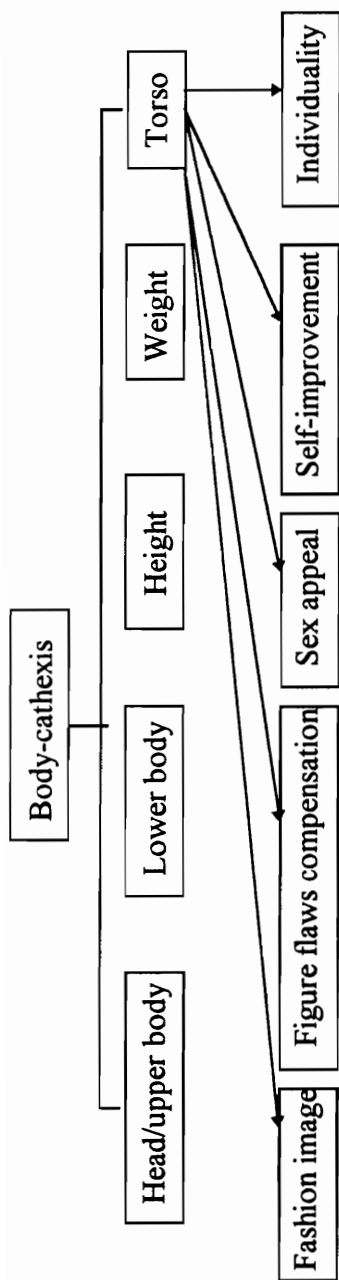


Figure 15: Torso-cathexis and clothing benefits sought

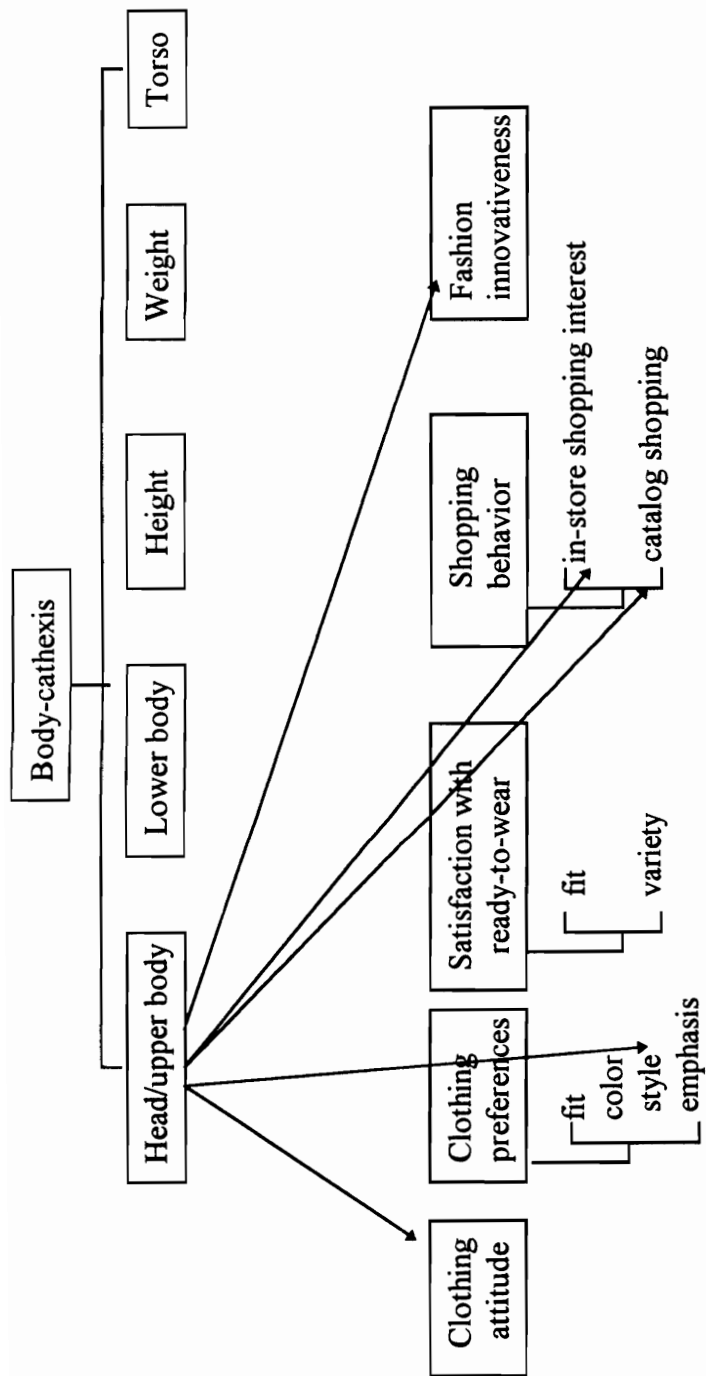


Figure 16: Head-upper body-cathexis and clothing attitude/behavior

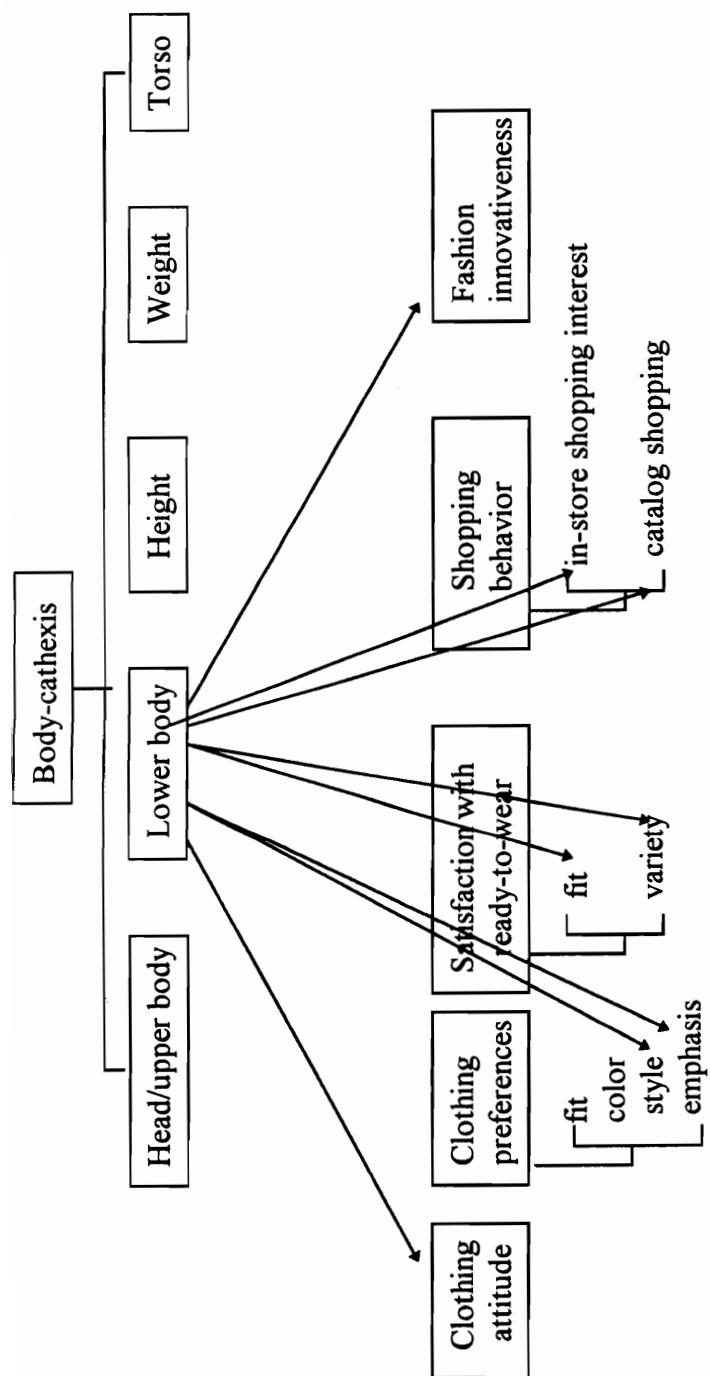


Figure 17: Lower body-cathexis and clothing attitude/behavior

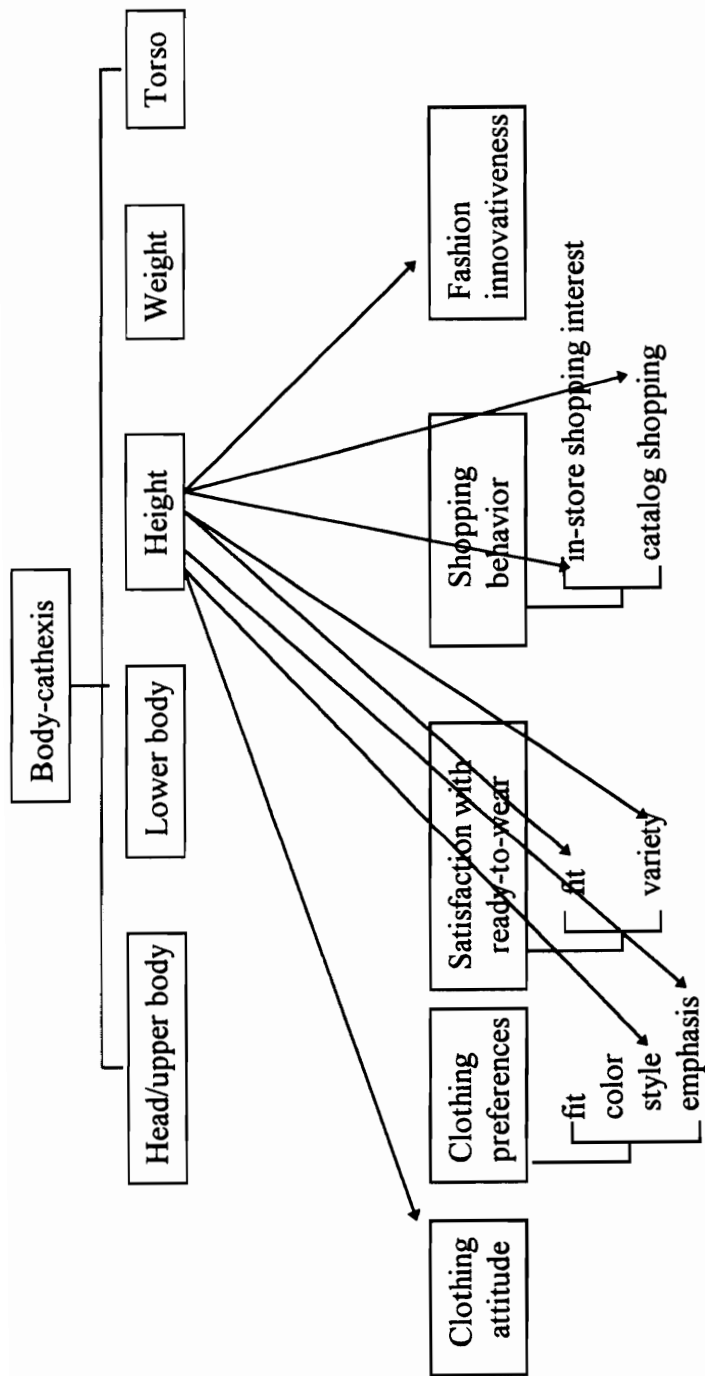


Figure 18: Height-cathexis and clothing attitude/behavior

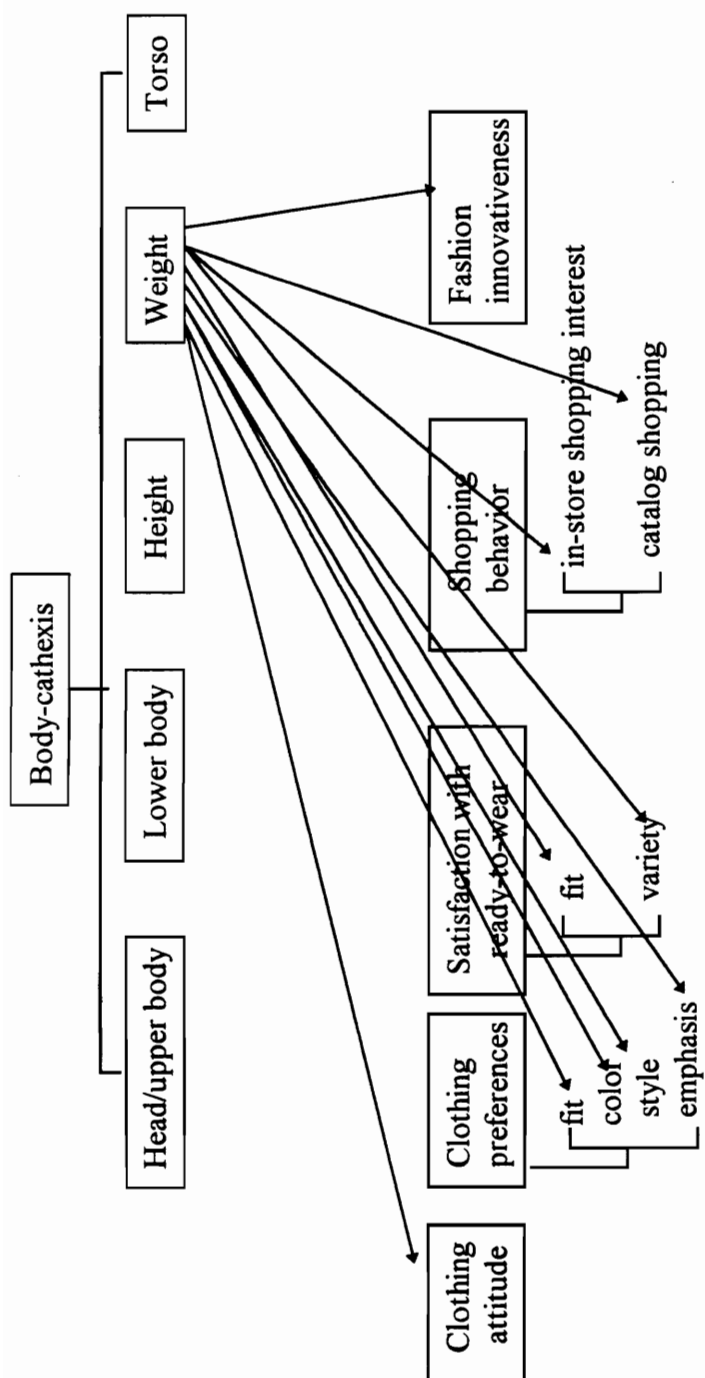


Figure 19: Weight-cathexis and clothing attitude/behavior

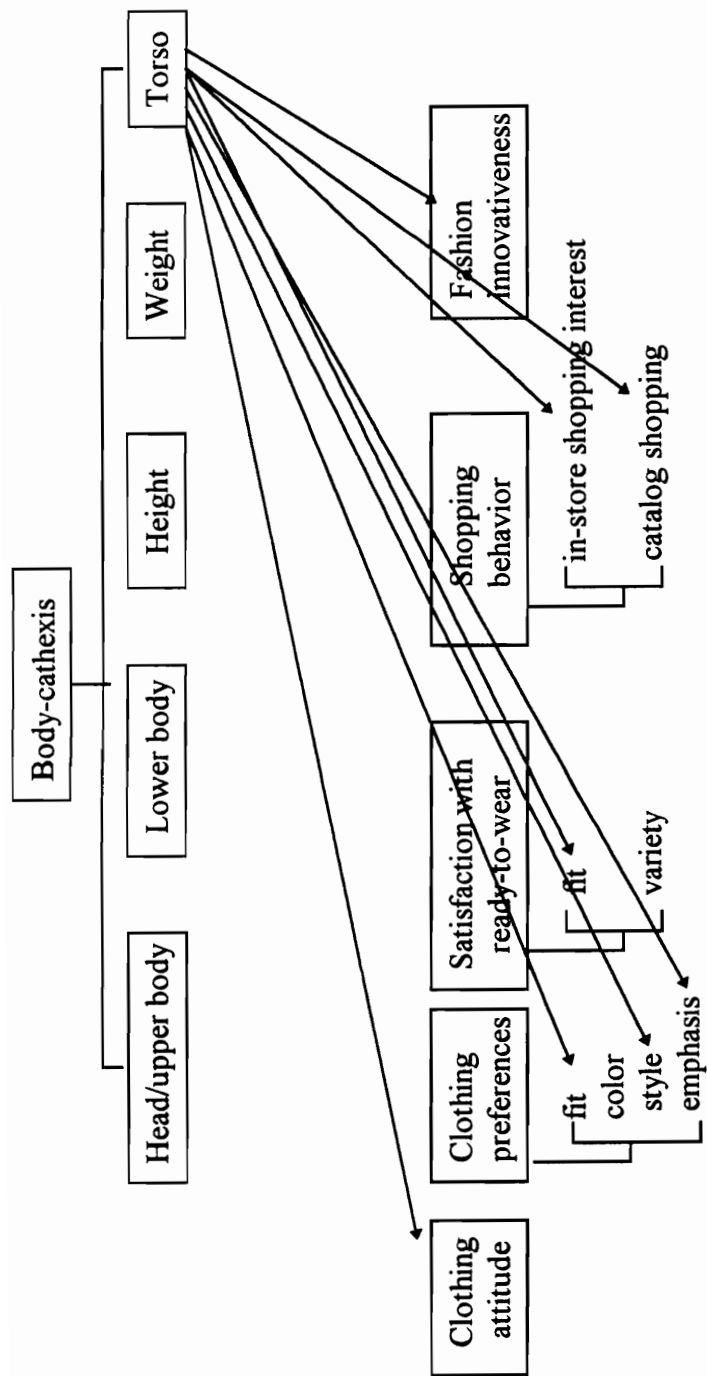


Figure 20: Torso-cathexis and clothing attitude/behavior

Appendix B
Cover Letter and the Questionnaire

Dear Respondent:

We are conducting research on college students' attitudes toward shopping and clothing available on the market. Your ideas are important to us, and your answers can help apparel manufacturers and retailers meet consumers' clothing needs better. Please answer all questions. All your answers will be confidential.

When you have completed the questionnaire, please fold it in half so that the address printed on the back is showing. Then staple or tape it closed.

You may return the questionnaire through campus mail; no postage is necessary. Otherwise, you may bring it back to this class, where the investigator will be available at the door for the next few times the class meets.

If you have any questions or suggestions regarding our research, please contact us through the Department of Clothing and Textiles (540-231-6179). Also, if you are interested in the results of the study, please contact us and we'll gladly send them.

Thank you for your time and cooperation.

Sincerely,

JinSook Hwang
Graduate Student

Marjorie Norton
Associate Professor

QUESTIONNAIRE

Section A: Each item below is related to a part of your body. For each item please circle the number that tells how you feel about that body part.

	Extremely Satisfied	Quite Satisfied	Slightly Satisfied	Neither	Slightly Dissatisfied	Quite Dissatisfied	Extremely Dissatisfied
1. Neck _____	7	6	5	4	3	2	1
2. Calves _____	7	6	5	4	3	2	1
3. Teeth _____	7	6	5	4	3	2	1
4. Face _____	7	6	5	4	3	2	1
5. Hair _____	7	6	5	4	3	2	1
6. Nose _____	7	6	5	4	3	2	1
7. Hips _____	7	6	5	4	3	2	1
8. Knees _____	7	6	5	4	3	2	1
9. Legs _____	7	6	5	4	3	2	1
10. Voice _____	7	6	5	4	3	2	1
11. Overall height _____	7	6	5	4	3	2	1
12. Leg length _____	7	6	5	4	3	2	1
13. Overall weight _____	7	6	5	4	3	2	1
14. Feet _____	7	6	5	4	3	2	1
15. Waist _____	7	6	5	4	3	2	1
16. Bust _____	7	6	5	4	3	2	1
17. Eyes _____	7	6	5	4	3	2	1
18. Muscular strength _____	7	6	5	4	3	2	1
19. Thighs _____	7	6	5	4	3	2	1

Section B: Each item below is related to a part of your body. For each item please circle the number that indicates how important you feel it is that you meet what you consider the ideal standard for each body part.

	Extremely Important	Quite Important	Slightly Important	Neither	Slightly Unimportant	Quite Unimportant	Extremely Unimportant
1. Neck _____	7	6	5	4	3	2	1
2. Calves _____	7	6	5	4	3	2	1
3. Teeth _____	7	6	5	4	3	2	1
4. Face _____	7	6	5	4	3	2	1
5. Hair _____	7	6	5	4	3	2	1
6. Nose _____	7	6	5	4	3	2	1
7. Hips _____	7	6	5	4	3	2	1
8. Knees _____	7	6	5	4	3	2	1
9. Legs _____	7	6	5	4	3	2	1
10. Voice _____	7	6	5	4	3	2	1
11. Overall height _____	7	6	5	4	3	2	1
12. Leg length _____	7	6	5	4	3	2	1
13. Overall weight _____	7	6	5	4	3	2	1
14. Feet _____	7	6	5	4	3	2	1
15. Waist _____	7	6	5	4	3	2	1
16. Bust _____	7	6	5	4	3	2	1
17. Eyes _____	7	6	5	4	3	2	1
18. Muscular strength —	7	6	5	4	3	2	1
19. Thighs _____	7	6	5	4	3	2	1

Section C: Here are some questions about your opinions. Please circle the number that tells how you feel.

	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1. Wearing the latest styles is important to me in order to maintain a fashionable image.	5	4	3	2	1
2. Dressing to appeal to the opposite sex is important to me.	5	4	3	2	1
3. Clothing is of concern to me in social interactions.	5	4	3	2	1
4. I try to cover my figure flaws with clothing.	5	4	3	2	1
5. The clothing I choose to wear is a way of lifting my self-esteem.	5	4	3	2	1
6. I tend to select clothes that fit tightly to my figure.	5	4	3	2	1
7. I like to select clothing which emphasizes my waist.	5	4	3	2	1
8. Dressing well is important for advancement of one's career.	5	4	3	2	1
9. In general, I find in-store shopping for clothes enjoyable.	5	4	3	2	1
10. I am generally satisfied with the pant lengths in ready-to-wear clothing.	5	4	3	2	1
11. I am satisfied with the available size range of ready-to-wear clothing.	5	4	3	2	1
12. I try something new in each season's fashions.	5	4	3	2	1
13. I am willing to buy my clothes by mail.	5	4	3	2	1
14. I try to select clothes that portray a fashionable image.	5	4	3	2	1
15. I buy clothes which will emphasize my femininity.	5	4	3	2	1
16. I select clothing that I think will enhance my reputation.	5	4	3	2	1
17. I select clothing that will camouflage my figure problems.	5	4	3	2	1
18. I like to select formal styles of clothing as a matter of preference.	5	4	3	2	1
19. I tend to select clothes that are dark colored.	5	4	3	2	1
20. I am concerned with dressing for individuality.	5	4	3	2	1
21. Clothing is valuable to me in social interactions.	5	4	3	2	1
22. I tend to select loosely fitting clothes.	5	4	3	2	1
23. I am satisfied with the fit at my thighs in ready-to-wear clothing.	5	4	3	2	1
24. I like to select clothing which emphasizes my bust.	5	4	3	2	1
25. I am usually among the last to try new clothing fashions.	5	4	3	2	1

	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
26. I am satisfied with the available style selection in ready-to-wear clothing.	5	4	3	2	1
27. I am satisfied with the fit at my hips in ready-to-wear clothing.	5	4	3	2	1
28. I buy my clothes by catalog order.	5	4	3	2	1
29. I like to select sexy styles of clothing as a matter of preference.	5	4	3	2	1
30. I like to select clothing which emphasizes my neck.	5	4	3	2	1
31. I tend to select clothes that are unusual.	5	4	3	2	1
32. I enjoy browsing in stores even when I am not out to buy clothes.	5	4	3	2	1
33. I am satisfied with the variety of colors/prints in ready-to-wear clothing.	5	4	3	2	1
34. I am satisfied with the fit at my waist in ready-to-wear clothing.	5	4	3	2	1
35. I like to select clothing which emphasizes my legs.	5	4	3	2	1
36. I use clothing as a tool to make my figure look like the ideal.	5	4	3	2	1
37. I try to choose clothes that make me look distinctive.	5	4	3	2	1
38. I am satisfied with the fit at my bust in ready-to-wear clothing.	5	4	3	2	1
39. A person's reputation at work is affected by how she dresses.	5	4	3	2	1
40. I like to select dramatic styles of clothing as a matter of preference.	5	4	3	2	1
41. I tend to select clothes that are bright colored.	5	4	3	2	1
42. I like to select clothing which emphasizes my hips.	5	4	3	2	1
43. I am willing to try new clothing fashion ideas.	5	4	3	2	1
44. Wearing proper clothing helps me gain respect.	5	4	3	2	1
45. I am satisfied with the fit at the neckline in ready-to-wear clothing.	5	4	3	2	1
46. I try to select updated fashions and accessories.	5	4	3	2	1
47. I believe that catalog shopping for apparel offers what I need.	5	4	3	2	1
48. I dress to impress the opposite sex.	5	4	3	2	1
49. It is fun to go to a store to shop for clothes.	5	4	3	2	1
50. I select clothing to enhance other people's regard for me.	5	4	3	2	1

Section D:

1. Your age : _____

2. Sex: a) Female b) Male

3. Academic level: a) Freshman b) Sophomore c) Junior d) Senior e) Graduate student

Thank you.

Appendix C
The Questionnaire for Pilot Test

QUESTIONNAIRE

Section A: Each item below is related to a part of your body. For each item please circle the number that tells how you feel about that body part.

	Extremely Satisfied	Quite Satisfied	Slightly Satisfied	Neither	Slightly Dissatisfied	Quite Dissatisfied	Extremely Dissatisfied
1. Neck _____	7	6	5	4	3	2	1
2. Calves _____	7	6	5	4	3	2	1
3. Teeth _____	7	6	5	4	3	2	1
4. Face _____	7	6	5	4	3	2	1
5. Hair _____	7	6	5	4	3	2	1

6. Nose _____	7	6	5	4	3	2	1
7. Hips _____	7	6	5	4	3	2	1
8. Knees _____	7	6	5	4	3	2	1
9. Legs _____	7	6	5	4	3	2	1
10. Voice _____	7	6	5	4	3	2	1

11. Overall height _____	7	6	5	4	3	2	1
12. Leg length _____	7	6	5	4	3	2	1
13. Overall weight _____	7	6	5	4	3	2	1
14. Feet _____	7	6	5	4	3	2	1
15. Waist _____	7	6	5	4	3	2	1

16. Bust _____	7	6	5	4	3	2	1
17. Eyes _____	7	6	5	4	3	2	1
18. Muscular strength _____	7	6	5	4	3	2	1
19. Thighs _____	7	6	5	4	3	2	1

Section B: Each item below is related to a part of your body. For each item please circle the number that indicates how important you feel it is that you meet what you consider the ideal standard for each body part.

	Extremely Important	Quite Important	Slightly Important	Neither	Slightly Unimportant	Quite Unimportant	Extremely Unimportant
1. Neck _____	7	6	5	4	3	2	1
2. Calves _____	7	6	5	4	3	2	1
3. Teeth _____	7	6	5	4	3	2	1
4. Face _____	7	6	5	4	3	2	1
5. Hair _____	7	6	5	4	3	2	1
6. Nose _____	7	6	5	4	3	2	1
7. Hips _____	7	6	5	4	3	2	1
8. Knees _____	7	6	5	4	3	2	1
9. Legs _____	7	6	5	4	3	2	1
10. Voice _____	7	6	5	4	3	2	1
11. Overall height _____	7	6	5	4	3	2	1
12. Leg length _____	7	6	5	4	3	2	1
13. Overall weight _____	7	6	5	4	3	2	1
14. Feet _____	7	6	5	4	3	2	1
15. Waist _____	7	6	5	4	3	2	1
16. Bust _____	7	6	5	4	3	2	1
17. Eyes _____	7	6	5	4	3	2	1
18. Muscular strength _____	7	6	5	4	3	2	1
19. Thighs _____	7	6	5	4	3	2	1

Section C: Here are some questions about your opinions. Please circle the number that tells how you feel.

	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1. Wearing the latest styles is important to me in order to maintain a fashionable image.	5	4	3	2	1
2. Dressing to appeal to the opposite sex is important to me.	5	4	3	2	1
3. Clothing is of concern to me.	5	4	3	2	1
4. I try to cover my figure flaws with clothing.	5	4	3	2	1
5. My self-esteem is enhanced by the clothing I wear.	5	4	3	2	1
6. I tend to select clothes that fit tightly to my figure.	5	4	3	2	1
7. I like to select clothing which emphasizes my waist.	5	4	3	2	1
8. Dressing well is important for advancement of one's career.	5	4	3	2	1
9. In general, I find in-store shopping for clothes enjoyable.	5	4	3	2	1
10. I am generally satisfied with the pant lengths in ready-to-wear clothing.	5	4	3	2	1
11. I am satisfied with the available size range of ready-to-wear clothing.	5	4	3	2	1
12. I try something new in the each season's fashions.	5	4	3	2	1
13. I am willing to buy my clothes by mail.	5	4	3	2	1
14. I try to select clothes that for a fashionable image.	5	4	3	2	1
15. I buy clothes which emphasize my femininity.	5	4	3	2	1
16. My reputation is improved by the clothing I wear.	5	4	3	2	1
17. I select clothing that camouflages my figure problems.	5	4	3	2	1
18. I like to select formal styles of clothing as a matter of preference.	5	4	3	2	1
19. I tend to select clothes that are dark colored.	5	4	3	2	1
20. I am more concerned with dressing for individuality than with following current fashion.	5	4	3	2	1
21. Clothing is valuable to me.	5	4	3	2	1
22. I tend to select loosely fitting clothes.	5	4	3	2	1
23. I am satisfied with the fit at my thighs in ready-to-wear clothing.	5	4	3	2	1
24. I like to select clothing which emphasizes my bust.	5	4	3	2	1
25. I am usually among the last to try new clothing fashions.	5	4	3	2	1

	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
26. I am satisfied with the available style selection of ready-to-wear clothing.	5	4	3	2	1
27. I am satisfied with the fit at my hips in ready-to-wear clothing.	5	4	3	2	1
28. I buy my clothes by catalog order.	5	4	3	2	1
29. I like to select sexy styles of clothing as a matter of preference.	5	4	3	2	1
30. I like to select clothing which emphasizes my neck.	5	4	3	2	1
31. I tend to select clothes that are unusual.	5	4	3	2	1
32. I enjoy browsing even when I am not out to buy anything.	5	4	3	2	1
33. I am satisfied with the variety of colors/prints in ready-to-wear clothing.	5	4	3	2	1
34. I am satisfied with the fit at my waist in ready-to-wear clothing.	5	4	3	2	1
35. I like to select clothing which emphasizes my legs.	5	4	3	2	1
36. I use clothing as a tool to make my figure look like the ideal.	5	4	3	2	1
37. I try to choose clothes that make me look distinctive.	5	4	3	2	1
38. I am satisfied with the fit at my bust in ready-to-wear clothing.	5	4	3	2	1
39. A person's reputation at work is affected how she dresses.	5	4	3	2	1
40. I like to select dramatic styles of clothing as a matter of preference.	5	4	3	2	1
41. I tend to select clothes that are bright colored.	5	4	3	2	1
42. I like to select clothing which emphasizes my hips.	5	4	3	2	1
43. I am willing to try new clothing fashion ideas.	5	4	3	2	1
44. Wearing proper clothing helps me gain respect.	5	4	3	2	1
45. I am satisfied with the neckline in ready-to-wear clothing.	5	4	3	2	1
46. I believe that catalog shopping for apparel offers what I need.	5	4	3	2	1

Section D: Please circle the letter beside your annual total expenditure for your clothing, accessories (such as shoes), and clothing services (such as custom sewing and dry cleaning).

- a) less than \$300
- b) \$300 to \$599
- c) \$600 to \$899
- d) \$900 to \$1199
- e) \$1200 to \$1499
- f) \$1500 to \$1799
- g) \$1800 and above.

Section E:

1. Your age : _____
2. Sex: a) Female b) Male
3. Academic status: a) Freshman b) Sophomore c) Junior d) Senior
e) Graduate student

Thank you.

Appendix D
Results for Collinearity Diagnostics

Table 44: Collinearity diagnostics for H1, H2a, H2b-1, H2d, & H2e

Variance Inflation Analysis

Variable	Variance Inflation
INTERCEPT	0.0000
BCU	2.0064
BCL	2.9300
BCH	1.9810
BCW	2.3214
BCT	2.3621

Eigenvalue Analysis

No	Eigenvalue	Condition Index	Var Prop intercept	Var Prop BCU	Var Prop BCL	Var Prop BCH	Var Prop BCW	Var Prop BCT
1	5.82827	1.00000	0.0011	0.0006	0.0006	0.0012	0.0015	0.0007
2	0.07237	8.97426	0.1263	0.0375	0.0083	0.0007	0.4380	0.0014
3	0.04130	11.87951	0.1097	0.0065	0.0263	0.7218	0.0133	0.0495
4	0.02599	14.97603	0.6314	0.0254	0.0595	0.0044	0.2325	0.3284
5	0.01716	18.42701	0.0422	0.4213	0.6082	0.1135	0.3143	0.0353
6	0.01492	19.76770	0.0892	0.5086	0.2971	0.1585	0.0004	0.5848

Note. BCU = body-cathexis for head/upper body
 BCL = body-cathexis for lower body
 BCH = body-cathexis for height
 BCW = body-cathexis for weight
 BCT = body-cathexis for torso

Table 45: Collinearity diagnostics for H2b-2 & H2c-1

Variance Inflation Analysis

Variable	Variance Inflation
INTERCEPT	0.0000
BCL	1.4613
BCH	1.4613

Eigenvalue Analysis

Number	Eigenvalue	Condition Index	Var Prop intercept	Var Prop BCL	Var Prop BCH
1	2.92922	1.00000	0.0064	0.0050	0.0063
2	0.04159	8.39195	0.6849	0.0001	0.6605
3	0.02919	10.01776	0.3088	0.9949	0.3331

Note.

BCL = body-cathexis for lower body
BCH = body-cathexis for height

Table 46: Collinearity diagnostics for H2b-5

Variance Inflation Analysis

Variable	Variance Inflation
INTERCEPT	0.0000
BCW	1.5261
BCT	1.5261

Eigenvalue Analysis

Number	Eigenvalue	Condition Index	Var Prop intercept	Var Prop BCW	Var Prop BCT
1	2.91192	1.00000	0.0064	0.0090	0.0043
2	0.06379	6.75616	0.3416	0.7379	0.0121
3	0.02429	10.94939	0.6520	0.2531	0.9836

Note.

BCW = body-cathexis for weight

BCT = body-cathexis for torso

Table 47: Collinearity diagnostics for H2c-4

Variance Inflation Analysis

Variable	Variance Inflation
INTERCEPT	0.0000
BCH	1.4353
BCW	1.4353

Eigenvalue Analysis

Number	Eigenvalue	Condition Index	Var Prop intercept	Var Prop BCH	Var Prop BCW
1	2.89938	1.00000	0.0086	0.0066	0.0096
2	0.06291	6.78855	0.5084	0.0086	0.7584
3	0.03770	8.76958	0.4830	0.9848	0.2320

Note.

BCH = body-cathexis for height

BCW = body-cathexis for weight

Table 48: Collinearity diagnostics for H3, H4a, H4d, & H4e

Variance Inflation Analysis

Variable	Variance Inflation
INTERCEPT	0.0000
BCU	2.5676
BCL	3.0583
BCH	1.9973
BCW	3.1180
BCT	2.5744
IMU	4.4929
IML	4.9754
IMH	2.5983
IMW	3.0307
IMT	2.7580

Eigenvalue Analysis

No	Eigenvalue	Condition Index	Var Prop BCU	Var Prop BCL	Var Prop BCH	Var Prop BCW	Var Prop BCT	Var Prop IMU	Var Prop IML	Var Prop IMH	Var Prop IMW	Var Prop IMT
1	10.57899	1.00000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.21539	7.00824	0.002	0.010	0.018	0.038	0.009	0.003	0.004	0.018	0.002	0.005
3	0.06810	12.46330	0.045	0.000	0.041	0.246	0.010	0.000	0.002	0.016	0.008	0.030
4	0.04118	16.02744	0.001	0.034	0.515	0.008	0.110	0.001	0.000	0.056	0.002	0.011
5	0.02738	19.65641	0.069	0.014	0.226	0.017	0.001	0.000	0.005	0.370	0.001	0.187
6	0.01739	24.66648	0.114	0.688	0.045	0.230	0.106	0.010	0.016	0.067	0.000	0.001
7	0.01624	25.52377	0.027	0.000	0.064	0.261	0.501	0.003	0.018	0.095	0.039	0.027
8	0.01329	28.21022	0.084	0.184	0.052	0.000	0.103	0.066	0.061	0.284	0.017	0.001
9	0.01034	31.98426	0.629	0.000	0.031	0.066	0.106	0.113	0.024	0.021	0.044	0.546
10	0.00622	41.24044	0.007	0.008	0.000	0.003	0.035	0.439	0.825	0.002	0.006	0.178
11	0.00548	43.95646	0.018	0.057	0.004	0.127	0.015	0.361	0.041	0.065	0.876	0.010

Note. BCU = body-cathexis for head/upper body
 BCL = body-cathexis for lower body
 BCH = body-cathexis for height
 BCW = body-cathexis for weight
 BCT = body-cathexis for torso
 IMU = importance of meeting the ideal body image for head/upper body
 IML = importance of meeting the ideal body image for lower body
 IMH = importance of meeting the ideal body image for height
 IMW = importance of meeting the ideal body image for weight
 IMT = importance of meeting the ideal body image for torso

Table 49: Collinearity diagnostics for H4b-1

Variance Inflation Analysis

Variable	Variance Inflation
INTERCEPT	0.0000
BCL	1.4693
BCH	1.4674
IML	2.1381
IMH	2.1384

Eigenvalue Analysis

Number	Eigenvalue	Condition Index	Var Prop intercept	Var Prop BCL	Var Prop BCH	Var Prop IML	Var Prop IMH
1	4.82046	1.000	0.001	0.001	0.002	0.000	0.001
2	0.11099	6.590	0.000	0.085	0.146	0.031	0.095
3	0.03330	12.031	0.061	0.497	0.849	0.001	0.024
4	0.02181	14.867	0.603	0.371	0.001	0.028	0.380
5	0.01345	18.932	0.334	0.043	0.000	0.938	0.498

Note.

- BCL = body-cathexis for lower body
- BCH = body-cathexis for height
- IML = importance of meeting the ideal body image for lower body
- IMH = imporatnce of meeting the ideal body image for height

Table 50: Collinearity diagnostics for H4b-2

Variance Inflation Analysis

Variable	Variance Inflation
INTERCEPT	0.0000
BCW	1.0603
IMW	1.0603

Eigenvalue Analysis

Number	Eigenvalue	Condition Index	Var Prop intercept	Var Prop BCW	Var Prop IMW
1	2.89215	1.000	0.002	0.012	0.002
2	0.09785	5.436	0.013	0.767	0.063
3	0.00999	17.011	0.984	0.219	0.934

Note.

BCW = body-cathexis for weight

IMW = importance of meeting the ideal body image for weight

Table 51: Collinearity diagnostics for H4b-3

Variance Inflation Analysis

Variable	Variance Inflation
INTERCEPT	0.0000
BCT	1.0001
IMT	1.0001

Eigenvalue Analysis

Number	Eigenvalue	Condition Index	Var Prop intercept	Var Prop BCT	Var Prop IMT
1	2.92811	1.000	0.003	0.006	0.005
2	0.05452	7.328	0.001	0.558	0.413
3	0.01738	12.980	0.995	0.435	0.581

Note.

BCT = body-cathexis for torso

IMT = importance of meeting the ideal body image for torso

Table 52: Collinearity diagnostics for H4b-4

Variance Inflation Analysis

Variable	Variance Inflation
INTERCEPT	0.0000
BCH	1.5021
BCW	1.6508
IMH	1.4909
IMW	1.6119

Eigenvalue Analysis

Number	Eigenvalue	Condition Index	Var Prop intercept	Var Prop BCH	Var Prop BCW	Var Prop IMH	Var Prop IMW
1	4.78556	1.000	0.000	0.002	0.003	0.002	0.000
2	0.12842	6.104	0.003	0.059	0.257	0.084	0.018
3	0.04883	9.899	0.010	0.452	0.445	0.220	0.011
4	0.02852	12.952	0.182	0.474	0.092	0.514	0.047
5	0.00866	23.504	0.802	0.010	0.201	0.187	0.922

Note.

BCH = body-cathexis for height

BCW = body-cathexis for weight

IMH = importance of meeting the ideal body image for height

IMW = imporatance of meeting the ideal body image for weight

Appendix E

Supplement: Research Journal Manuscript Draft

Supplement

Manuscript for the Clothing and Textiles Research Journal

Body-Cathexis, Self-Esteem, and Clothing Behavior of
Men and Women Aged 55 Years and Older

JinSook Hwang

Marjorie J. T. Norton

Lillian O. Holloman

1 **Body-Cathexis, Self-Esteem, and Clothing Behavior of**
2 **Men and Women Aged 55 Years and Older**

3
4 **ABSTRACT**

5
6 Although there are many studies regarding body image of younger people, there have
7 been few studies on that of older people. The purpose of this study was to determine
8 the relationships between body-cathexis, self-esteem, clothing behavior, and
9 demographics of a sample of men and women aged 55 years and older. Data were
10 obtained through mail survey from 67 men and 75 women, of ages 55-64, 65-74 and
11 75 and over, who were residents of a large southeastern city. Results showed positive
12 relationships between body-cathexis, self-esteem, and clothing behavior for the entire
13 sample, though the self-esteem and clothing behavior of the women were more
14 strongly related with their body satisfaction than were those of the men. Of the six
15 demographic variables examined, only some were significantly related to body-
16 cathexis and clothing behavior.

17
18
19
20
21 Key words: body-cathexis, elderly, self-esteem, clothing behavior

Body-Cathexis, Self-Esteem, and Clothing Behavior of Men and Women Aged 55 Years and Older

The United States population as a whole is aging as life expectancy increases and the baby-boom generation matures. Various authors (e.g., Schewe, 1989; Shim & Bickle, 1993; Goldsberry, 1993) describe the age redistribution of Americans; the population segment aged 55 years and older has been increasing more rapidly than others, now totals approximately 50 million, and is expected to keep rising in number and percentage beyond the current 20%. Americans of this age bracket are on average more wealthy, better educated, and more healthy and active than in the past (Schewe, 1989). They control three-fourths of U.S. assets and half of the disposable income (Moschis, Mathur, & Smith, 1993). The growth in the sheer size of this population segment and in the buying power they wield should prompt the attention of apparel manufacturers and retailers.

Progress in understanding and responding to mature consumers' needs and desires is needed (Goldsberry, 1993; Greco, 1987; Lumpkin, 1985). Available evidence indicates that average expenditures for clothing decline with advancing age (Magrabi, Chung, Cha, & Yang, 1991; Norum, 1989). Yet, apparel marketers may miss profitable opportunities if they dismiss mature consumers as a peripheral market, and do not heed the changes and the diversity in the older population as well as generational comparisons beyond average expenditure allocations. For example, Lumpkin (1985) and Greco (1987) noted the importance of lifestyle and health status

1 in differentiating among elderly consumers and in differentiating older and younger
2 consumers, as to clothing tastes and shopping orientations. Both the persistence and
3 the adjustment of self-concept, role identity, and values are additional factors that
4 may affect consumer behavior (Greco, 1987; Jackson, 1992). Neal, Schwenk, and
5 Courtless (1990) presented data showing considerable diversity in a national sample
6 of over 4,000 households with reference persons in five age ranges from 65-69 years
7 to 85 plus years. The data showed large differences in average annual expenditures
8 for clothing, depending on age, income, education, and other variables. Many
9 researchers cite older people's sustained interest in fashion and clothing (e.g.,
10 Chowdary, 1988), as well as dissatisfactions with ready-to-wear fit and styles in a
11 market geared toward youth (e.g., Goldsberry, 1993; Shim & Bickle, 1993).

12 The present research sought to augment knowledge about elderly consumers
13 by examining the relationship of body-cathexis to self-esteem and clothing behavior,
14 using a sample of men and women aged 55 years and older. Body cathexis is the
15 evaluative dimension of body image which is the self component that Gergen (1971)
16 called the mental view of one's own body. Body image and self-esteem have been
17 identified as the most important components of self-concept (Kalish, 1975). Clothing
18 may be viewed as an extension of one's bodily self (Shim, Kotsiopulos, & Knoll
19 1991), and one's self-feeling toward the body affects clothing preferences and
20 attitudes (Kaiser, 1990). Our focus on body-cathexis, in relation to self-esteem and
21 clothing behavior, arises from recognition of the changes in the human body in later

1 life and the possible influence on feelings of self-worth, in view of the high value on
2 physical attractiveness and the negative image of aging in American culture (Jackson
3 & O'Neal, 1994; Moriarty & Moriarty, 1988; Stephens, Hill, & Hansen, 1994). The
4 previous studies on the impact of body-cathexis on self-esteem and clothing behavior
5 have largely ignored older people, and few investigations have concerned men or
6 compared women and men.

7 The specific objectives of our research were to examine relationships between
8 1) body-cathexis and self-esteem, 2) body-cathexis and clothing behavior (clothing
9 attitude, fashion opinion leadership, satisfaction with ready-to-wear, shopping
10 behavior, and clothing expenditure), 3) self-esteem and clothing behavior, 4) body-
11 cathexis and demographics (income, marital status, social participation, education,
12 age, and sex), and 5) demographics and clothing behavior. Demographic variables
13 were included due to evidence of their relationship to attitudes and behavior of elderly
14 people (e.g., Hoffman, 1970; Jackson, 1992; Kimmel, 1974). Similarities and
15 differences between men and women were addressed in each research objective.

16 **Literature Review**

17 **Body Image and Self-Esteem, Vital Components of Self-Concept**

18 Body image and self-esteem are vital components of self-concept, the total
19 image of one's self which contains one's actual experiences and interpretations about
20 the experiences (Kalish, 1975). To discriminate the multi-dimensions of the global
21 self, James (1890) distinguished between "the self as a knower or I" (relating to the

1 experience process) and “the self as known or me” (relating to interpretation of the
2 experiencing). Body image “refers to the body as a psychological experience and
3 focuses on the individual’s feelings and attitudes toward his [sic] own body” (Fisher,
4 1968, p. x). This aspect of the “self as knower” is considered one of the earliest parts,
5 and a foundation, of self-concept because self awareness begins with experiencing
6 one’s own body (Burns, 1979). Body-cathexis, the evaluative dimension of body
7 image, involves positive or negative feelings or degrees of satisfaction with the body
8 (LeBat & DeLong, 1990). Secord and Jourard (1953), who designed the original
9 body-cathexis scale, found that positive attitudes toward the body coincided with high
10 self-esteem.

11 Self-esteem, referring to holistic self evaluation, is related to the “self as
12 known.” Self-esteem forms from personal evaluative judgment about oneself and
13 includes competence (skills, achievements), worth (morals, ethics, personality,
14 appearance), power (abilities to control and influence), and acceptance (others’
15 reactions) (Ross, 1992). Since the “self as known” includes “other self” as one
16 believes others perceive her/him and “ideal self” as one desires to be, the self
17 evaluation is based on personal standards and values influenced by society and
18 significant others (Burns, 1979). Self-esteem can be assessed as high or low, positive
19 or negative (Breytspraak & George, 1982).

20 Body image and self-esteem may be closely related because social standards
21 and values have a general influence on individuals’ perceptions and standards, and

1 because “the self as a knower” and “the self as known” interact and affect each other.
2 Given that physical attractiveness is culturally valued and appearance has significant
3 impact on social interactions (Burns, 1979), it is not surprising that a positive
4 relationship between body-cathexis and self-esteem has been found in some research
5 (Secord & Jourard, 1953; Thomas, 1988; Wendel & Lester, 1988).

6 The physical proximity of the body and clothing has engendered much
7 contemplation and analysis of relationships between clothing and self-concept, as
8 discussed by Sontag and Schlater (1982), Kaiser (1990), Burns (1979), and others.
9 Research has focused on various dimensions and measures of clothing behavior.
10 Several studies have shown a positive relationship between body cathexis and clothing
11 behavior (LeBat, 1988; LeBat & DeLong, 1990; Sontag & Schlater, 1982), as well as
12 a positive relationship between self-esteem and clothing behavior (Holloman, 1989;
13 Humphrey, Klaasen, & Creekmore, 1971). Shim, Kotsiopulos, and Knoll (1991)
14 examined interactions between body-cathexis and clothing attitudes, and their
15 relationship to clothing and shopping behaviors, for men aged 24 and under to 55 and
16 over. The sample was segmented into four groups, with body-cathexis and clothing
17 attitude both positive or both negative in two groups and with positive and negative
18 combinations of the two variables in the other two groups. The four groups differed
19 in clothing and shopping behaviors. Shim et al. concluded that the relationship of
20 body satisfaction to clothing attitude was not unidimensional, as had been suggested
21 in earlier research which they cited.

Ideal Body Image in American Culture and Body Changes of the Elderly

The current ideal body image in American culture can be expressed as narrow as an arrow or pencil thin (Freedman, 1986). Colburn (1992) noted that the American pursuit of thinness has been cultivated during the past three decades. This phenomenon has led to side effects such as dieting illness and flourishing diet industries (Stephens et al., 1994). Although as many males as females are not satisfied with some parts of their bodies (Cash, 1990), women worry more about body weight and consider it a more important component of body satisfaction (Brumberg, 1988; Fallon & Rozin, 1985). Greenwood (1984) reported that women are more humiliated by body changes than are men. Lake (1979) noted that the media encourage middle-aged women to diet, to stay younger-looking through the use of cosmetics, and to disguise "figure flaws" through appropriate selection of clothing.

The body changes in later life are negatively valued, and these changes can influence elderly people's self-concept, confidence, and sense of value (Kimmel, 1974). According to Aldrich (1974), elderly women subjects indicated negative feelings toward changes in their figures, such as heavier weight, thicker waist, unattractive arms, and lower bust. Researchers have reported that appearance is valued at every age and that older people care about their appearance and clothing (Baird, 1951; Hoffman, 1970; Kernaleguen, 1978). Indeed, Heyer and Owens (1978) found that elderly women become more interested in their appearances as they age and their bodies change.

Clothing of Older People

In regard to the importance of clothing to elderly people, several researchers have indicated that clothing plays an important role in enhancing appearance and in maintaining a positive self-image (Bader, 1963; Baum & Boxley, 1983; Hoffman, 1970; Newton, 1984). Heyer and Owens (1978) discussed that clothing can be more important to elderly women than when younger. Researchers have reported that many older people were interested in fashion and enjoyed shopping (Chowdhary, 1988; Huddleston, Ford, & Bickle, 1993; Kernaleguen, 1978; Lumpkin & Greenberg, 1982; Martin, 1976).

As aging is accompanied by physical changes, many researchers have examined the problems with ready-to-wear clothing of older people. Apparel fit problems are a major source of older people's dissatisfaction with ready-to-wear (Brunn, 1983; Richards, 1981; Woodson & Horridge, 1990). Goldsberry (1993) asserted that women aged 55 years and older have suffered ill-fitting ready-to-wear clothing because of the lack of attention to the body measurements of this age group. Specifically, researchers have found excessive garment length in shoulders, sleeves, skirts, and pants (Hogge & Baer, 1986; Hogge, Baer, & Kang-Park, 1988; Shim & Bickle, 1993). Elderly women reportedly have more ready-to-wear problems than do men due to the wider variety of garment styles for women (Goldsberry, 1993; Richards, 1981; Schewe, 1988; Smathers & Horridge, 1979).

1 In regard to apparel expenditures of older people, several researchers
2 investigated the influence of demographic variables on expenditures for clothing.
3 Although income is consistently found to be the most important factor in apparel
4 expenditures for older people, conflicting results exist on the impact of other
5 demographic variables on the expenditures (Hildreth & Kelly, 1984-85; Jackson,
6 1992; Neal, Schwenk, & Courtless, 1990; Reinecke, 1976).

7 Based on the literature, the following research hypotheses were formulated in
8 this study. H1. There are positive relationships between:

- 9 a. Body-cathexis and self-esteem
- 10 b. Body-cathexis and clothing behavior
- 11 c. Self-esteem and clothing behavior

12 H2. There are relationships between the demographic variables and

- 13 a. Body-cathexis
- 14 b. Clothing behavior

15 **Research Procedure**

16 **The Questionnaire and Variables Measured**

17 Drawing from existing instruments, a questionnaire was developed to collect
18 data on the variables. Pilot testing with 15 respondents aged 60 years and older,
19 including both men and women, yielded information about comprehensibility and
20 appropriateness as to overall format and question form. In addition, university faculty
21 knowledgeable in survey design and gerontology assessed clarity and face reliability

1 and validity. Some questions were deleted to reduce the total, some were restated,
2 and all were spread out more to enhance legibility. A question on annual clothing
3 expenditure was converted from open-ended to forced-choice ranges to assist recall,
4 and one on age was converted from forced-choice ranges to open-ended to avoid
5 direct reference to the target age group.

6 The final questionnaire and the measures of the research variables are
7 described below. Cronbach alpha coefficients for multi-item scales are reported.
8 Cronbach alpha is a measure of internal consistency, with values greater than 0.60
9 indicating good reliability (Schuessler, 1971). Coefficients obtained in past research
10 often are available; however, calculation in this research was deemed important due to
11 modification of existing instruments and incorporation of several scales in the new
12 questionnaire.

13 *Body-cathexis* was measured by subjects' scores after rating their satisfaction
14 with five areas of body parts on a 4-point Likert scale from satisfied (4) to dissatisfied
15 (1). Each subject's total summed score for all items was obtained, as were the
16 separate scores for the five body areas. The five areas encompassing 18 body parts
17 are: lower body (legs, calves, knees, feet); head/upper body (face, hair, eyes, nose,
18 teeth, voice); height (overall height, leg length); weight (overall weight, waist, hips);
19 and torso (bust, neck, muscular strength). The scale with the 18 body parts was
20 adapted from Shim, Kotsiopoulos, and Knoll (1991) who had used the modified 23-
21 item body-cathexis scale of Mahoney and Finch (1976). We eliminated or altered

1 some items which were more applicable to the all-male sample of Shim et al. The
2 Cronbach alpha for the 18 items was 0.91, indicating high reliability; those for the five
3 body areas ranged from 0.82 for lower body and height to 0.62 for torso.

4 Another part of the questionnaire listed, in random order, 43 statements for
5 measuring self-esteem and six of seven clothing behavior aspects, with a common 4-
6 point Likert scale from agree (4) to disagree (1). Figure 1 shows the 43 statements
7 grouped by the variables measured, along with Cronbach alpha coefficients. Items
8 pertinent to each of the variables were drawn from existing instruments, but several
9 have some change from the original for reasons cited earlier.

10
11

Place Figure 1 about here

13 *Self-esteem* was measured by subjects' total scores after rating their degree of
14 agreement with 10 items (see Figure 1). The items include eight from Rosenberg's
15 (1965) self-esteem scale and two which are modifications of the others in that scale.
16 Rosenberg's scale was used as the basis for our self-esteem measure because it had
17 been found to be reliable and valid in testing with diverse subjects (Chowdary, 1988;
18 Sontag & Schlater, 1982). As seen in Figure 1, five of the items are positive and five
19 are negative. Negative ones were reverse coded so that higher scores reflect higher
20 self-esteem. The Cronbach alpha coefficient obtained was 0.93.

1 *Clothing behavior* in this study includes clothing attitude, fashion opinion
2 leadership, satisfaction with ready-to-wear, shopping interest, satisfaction with
3 shopping, store patronage, and clothing expenditure. The 4-point Likert scale
4 mentioned earlier was used for all but the last. The statements presented to the
5 respondents are in Figure 1. The Cronbach alphas for the six multi-item clothing
6 behavior aspects ranged from 0.91 for satisfaction with ready-to-wear to 0.68 for
7 clothing attitude.

8 Clothing attitude was measured by subjects' total scores across five items
9 which reflect the tri-component view of clothing attitude (cognitive, affective, and
10 behavioral). The higher the score the more favorable the attitude toward clothing. The
11 five items are directly from Shim et al. (1991). Fashion opinion leadership was
12 operationalized in a similar manner, but using three statements from Shim and
13 Kotsiopoulos (1991). The measure of satisfaction with ready-to-wear, which focused
14 on fit and styles, was a modified version of the 14-item scale used by Perry (1985).
15 All 14 statements are negative (Figure 1). Due to reverse coding, a subject's
16 satisfaction with ready-to-wear was interpreted as directly proportional to her/his
17 summed score on these items.

18 Three of the clothing behavior variables involve shopping behavior. One of
19 them, shopping interest, was measured by the sum of scores on two items from Shim
20 et al. (1991). Another, satisfaction with shopping, tapped respondents' feelings about
21 such factors as sales personnel and store facilities through their degree of agreement

1 with the seven items in Figure 1. These statements are modifications of those used by
2 Perry (1985). All are negative; the coding and scoring were handled in the same way
3 as for those involving satisfaction with ready-to-wear. The third shopping behavior
4 variable was store patronage, measured by the summed scores on two items which
5 concerned a preference for confining clothing purchases to a particular store. The
6 items are from Shim et al. (1991).

7 The form of the question on clothing expenditure, the remaining clothing
8 behavior variable, differed from the others above. The question asked the personal
9 annual expenditure for clothing, accessories (such as shoes), and clothing services
10 (such as custom sewing and dry cleaning), in one of six ranges from 1 = "under \$199"
11 to 6 = "\$1,000 or above."

12 The last variables were six demographics. Yearly household income was asked
13 in one of five ranges from 1 = "under \$9,999" to 5 = "\$40,000 and above." Other
14 questions were on: age (open-ended); sex; marital status (currently married, not
15 married at this time); and highest education level (grade school or less, some high
16 school or a graduate, beyond high school). Lastly,, social participation was gauged by
17 yes/no responses to three questions: Are you a volunteer worker? Are you employed?
18 Are you retired? These were scored as follows: 1 if retired and neither volunteer
19 worker nor employed; 2 if volunteer worker or employed or not retired; 3 if volunteer
20 worker, employed and retired, or if either volunteer worker or employed along with
21 not retired; and 4 if volunteer worker, employed, and not retired.

Sample and Data Collection

As a result of attending regular and social meetings to describe the study, the researchers obtained 302 mailing addresses of older people who were members of senior centers and local churches in a large southeastern U.S. city. The questionnaire with a stamped envelope was mailed to each address; 142 usable questionnaires were returned for a return rate of 48 percent. To assess possible sampling bias, demographic characteristics of the 67 men and 75 women respondents are compared to the U.S. population aged 55 years and older in Table 1. The sample is relatively younger and more educated than the U.S. population in this age bracket. Respondents' marital status and household incomes seem fairly representative of this American age group.

Place Table 1 about here

Statistical Analysis of Data

In addition to data analysis with descriptive statistics, hypothesis testing was conducted using the Pearson correlation coefficient, Fisher's Z_r transformation, and multiple regression. Correlation coefficients were used in investigating relationships between body-cathexis, self-esteem, and clothing behavior. Fisher's Z_r transformation was performed on the correlation coefficients to assess differences between the coefficients for the men and the women. Multiple regression was used to investigate

1 the influence of each demographic variable on body-cathexis and on clothing
2 behavior, while holding the other included independent variables constant. All
3 rejection levels were set at the 0.05 significance level, although both 0.01 and 0.05
4 levels are reported.

5 **Results and Discussion**

6 This section follows the research objectives in addressing a series of
7 relationships between the variables of interest and thereby the relevant hypotheses.

8 **Body-cathexis and self-esteem.** A positive relationship between body-cathexis
9 and self-esteem was hypothesized. In examining the relationship between these two
10 variables, Pearson correlation coefficients were calculated for the entire sample and
11 for the men and women separately. Given that the body-cathexis measure includes
12 five areas of body parts, the relationship between self-esteem and each of the five
13 body-cathexis subscales was analyzed in addition to the relationship between self-
14 esteem and all five body-cathexis subscales together.

15

16 Place Table 2 about here

17

18 The correlation results shown in Table 2 support the hypothesized positive
19 relationship between body-cathexis and self-esteem. This is seen with overall body-
20 cathexis and with its subscales, for the entire sample and for both men and women.
21 The only exception is the nonsignificant correlation between the men's satisfaction

1 with weight and their self-esteem. Secord and Jourard (1953), Thomas (1988), and
2 Wendel and Lester (1988) also found a positive relationship between body-cathexis
3 and self-esteem, though using samples of younger age groups. The positive
4 relationship is consistent with the notion that body image and self-esteem, each being
5 an important component of self-concept, are subject to a common set of influences
6 and to each other's influence.

7 Due to our interest in comparing men and women, the Fisher's Z_r
8 transformation was performed to test sex differences in the correlation of body-
9 cathexis and self-esteem. In our analysis, a positive Z_r value means that women have a
10 higher correlation between body-cathexis and self-esteem than do men, and a negative
11 value means that men have the higher correlation. The results in Table 2 show a
12 significant difference between the men and women in the correlation of body-cathexis
13 for all five areas combined and self-esteem. Also, the men and women differ in regard
14 to the correlations of two subscales of body-cathexis (upper body and weight) and
15 self-esteem. Therefore, the self-esteem scores of the women subjects are more related
16 to body-cathexis for all five areas together and for upper body and weight than are
17 those of the men.

18 The differences between sexes in the correlation of body-cathexis for certain
19 body characteristics and self-esteem in this study are consistent with the results of
20 Wendel and Lester (1988). Wendel and Lester showed that college women who were
21 more satisfied with their hips and waists had higher self-esteem scores. For college

1 men, the men who were more satisfied with their voice and profile had higher self-
2 esteem scores.

3 Body-cathexis and clothing behavior. The relationship between each subscale
4 of body-cathexis and each dimension of clothing behavior was analyzed, in addition to
5 the relationship between body-cathexis for all five body areas together and each
6 dimension of clothing behavior. The Pearson correlation coefficients showed positive
7 significant relationships between body-cathexis and five dimensions of clothing
8 behavior (clothing attitude, satisfaction with ready-to-wear, satisfaction with
9 shopping, store patronage, and clothing expenditure) for the entire sample. Also, the
10 subscales of body-cathexis and those five dimensions of clothing behavior are
11 positively correlated for the whole sample. These findings provide support for
12 hypothesis 1-b, although the relationships between body-cathexis and two dimensions
13 of clothing behavior (fashion opinion leadership and shopping interest) were not
14 significant.

15 Pearson correlation coefficients between body-cathexis and clothing behavior
16 also were calculated for the men and women subjects separately. For the women, the
17 correlations were significant between body-cathexis and all seven dimensions of
18 clothing behavior. For the men, significant correlations were found between body-
19 cathexis and only four dimensions of clothing behavior (clothing attitude, satisfaction
20 with shopping, satisfaction with ready-to-wear, and clothing expenditure). Body-
21 cathexis thus may play a more important role in overall clothing behavior of elderly

1 women than of elderly men; however, the correlation analysis does not allow
2 inferences about a cause-effect relationship. According to Greenwood (1984), women
3 are more humiliated by body changes than men. Lake (1979) noted that middle-aged
4 women tried to diet and stay younger-looking through appropriate selection of
5 clothing. In this context, elderly women may be more concerned about their body
6 image and clothing.

7 The Fisher's Z_r transformation scores showed higher correlations for the
8 women than for the men between body-cathexis and fashion opinion leadership,
9 between body-cathexis and store patronage, between lower body satisfaction and
10 store patronage, and between weight satisfaction and satisfaction with ready-to-wear.
11 The high correlation between weight satisfaction and satisfaction with ready-to-wear
12 in elderly women in this study is consistent with LaBat and DeLong's (1990) finding
13 of a significant relationship between satisfaction with lower body (weight, hips, and
14 thighs) and fit of ready-to-wear in the women subjects in their research.

15 Self-esteem and clothing behavior. The Pearson coefficients showed, for the
16 whole sample, significant positive relationships between self-esteem and five clothing
17 behavior dimensions (clothing attitude, satisfaction with ready-to-wear, satisfaction
18 with shopping, store patronage, and clothing expenditure). This result supports our
19 research hypothesis 1-c, as well as the previous work of Holloman (1989) and of
20 Humphrey, Klaasen and Creekmore (1971) on the relationship between self-esteem
21 and dimensions of clothing behavior. When it comes to the similarities and differences

1 between sexes, there was a positive relationship between self-esteem and fashion
2 opinion leadership for the women but not for the men. Neither sex had a significant
3 correlation between self-esteem and shopping interest.

4 Body-cathexis and demographics. Multiple regression was used to investigate
5 the relationship between body-cathexis and demographics (sex, age, income, marital
6 status, social participation, and education) of the subjects. According to Table 3,
7 there is a positive relationship between body-cathexis for all five body areas together
8 and four demographic variables (sex, income, social participation, and education).
9 Elderly men appear to be more satisfied with their bodies than are elderly women.
10 Also, the subjects who had higher levels of income, social participation, and education
11 were more satisfied with their bodies. Thus, research hypothesis 2-a was partially
12 supported. The findings are consistent with those of Wendel and Lester (1988) who
13 addressed sex differences in body satisfaction of younger people. Also, these findings
14 are related to Hamilton and Chowdhary's (1989) discussion regarding the impact of
15 education and employment on body-cathexis of women.

16
17
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Place Table 3 about here

19
20 Demographics and clothing behavior. Multiple regression showed
21 relationships between the following pairs of variables: social participation and

1 clothing attitude, sex and fashion opinion leadership, sex and satisfaction with ready-
2 to-wear, sex and shopping interest, and income and clothing expenditure. Research
3 hypothesis 2-b was, therefore, partially supported. The relationship between clothing
4 attitude and social participation can be explained in the context of using clothing in
5 social interactions. People who have more social interactions may have a more
6 favorable attitude toward clothing because clothing can be used as a means of social
7 interaction. There are relationships between sex and three-dimensions of clothing
8 behavior (fashion opinion leadership, satisfaction with ready-to-wear, and shopping
9 interest). Women in the sample had a higher degree of fashion opinion leadership and
10 shopping interest than did the men; however, the women were more dissatisfied with
11 ready-to-wear. The elderly women's dissatisfaction with ready-to-wear may be
12 related to Richards' (1981) observation that elderly men have less difficulty with fit
13 than do elderly women because they wear separate shirts and trousers.

14 Results also show a positive relationship between income and clothing
15 expenditure. This is consistent with Jackson's (1992) study which showed that the
16 level of apparel expenditure was significantly related to income class. Norton and
17 Park (1987) noted that income is the most important variable affecting clothing
18 expenditure. The present study shows that income is the most important indicator of
19 clothing expenditure in the sample of mature consumers. The variables of age, sex,
20 marital status, social participation, and education had no significant influence on
21 clothing expenditure of the mature consumers when controlling for other variables.

1 This is inconsistent with the findings of several researchers (Dardis, Derrick, &
2 Lehfeld, 1981; Nielson, 1978; Norum, 1989) who reported relationships between
3 clothing expenditure and age, sex, marital status and education in the general
4 population. A possible explanation for the discrepancy may be that this study used
5 data grouped by level of apparel expenditures, instead of actual dollar values. Another
6 possible explanation is that young and old populations may differ in regard to
7 demographic influences on clothing expenditure.

8 Although most of the clothing behavior variables were significantly related to
9 specific demographic variables, satisfaction with shopping and store patronage were
10 not related to any demographic variables. Two demographic variables, age and
11 marital status, were not significantly related to any dimensions of clothing behavior.

12 **Conclusions, Implications, and Suggestions for Future Research**

13 This research investigated the relationship between body-cathexis, self-esteem,
14 clothing behavior, and demographics of men and women aged 55 years and older. The
15 Pearson correlation coefficient, Fisher's Z_r transformation, and multiple regression
16 were used in testing several research hypotheses. The correlation coefficients were
17 used to investigate the relationships between body cathexis, self-esteem, and clothing
18 behavior for the entire sample and for the men and women subjects separately.
19 Fisher's Z_r transformation score was used to find similarities and differences of men
20 and women in the correlation coefficients. Multiple regression was used to investigate

1 the relationship of demographic variables to body-cathexis and clothing behavior of
2 the subjects.

3 The hypotheses regarding the relationships between body-cathexis, self-
4 esteem, and clothing behavior of the elderly subjects were supported by the findings
5 showing significant relationships among these variables. The significant correlations
6 between body-cathexis, self-esteem, and five dimensions of clothing behavior in the
7 study imply the importance of body-cathexis of older people in their self-esteem and
8 dimensions of clothing behavior. However, it should be noted that two dimensions of
9 clothing behavior (shopping interest and fashion opinion leadership) were not
10 important in self-esteem and body-cathexis of the entire group of subjects. This stems
11 from the lack of significant relationships of fashion opinion leadership and shopping
12 interest to self-esteem and body-cathexis in the male subjects.

13 In addition, Fisher's Z_r transformation scores suggested that self-esteem and
14 clothing behavior of elderly women are more likely to be influenced by their body
15 satisfactions than are those of elderly men. In the case of the elderly women, total
16 body-cathexis and satisfaction with weight had higher correlations with self-esteem
17 and three dimensions of clothing behavior (fashion opinion leadership, store
18 patronage, and satisfaction with ready-to-wear) than did those of the elderly men
19 subjects. Elderly women's satisfaction with their total body and with weight may play
20 a more important role in their fashion opinion leadership, store patronage, and
21 satisfaction with ready-to-wear. The cultural focus on the young, thin body as the

1 ideal body image and women's humiliation from body changes (Greenwood, 1984)
2 may underlie the close relationship of weight and total body satisfaction to self-esteem
3 and clothing behavior in elderly women.

4 Multiple regression showed relationships between body-cathexis and four
5 demographic variables (sex, income, social participation, and education). The men
6 were more satisfied with their bodies than were the women. The elderly subjects who
7 had higher levels of income, social participation, and education were more satisfied
8 with their bodies. These demographic variables thus seem to be importantly
9 associated with the body satisfaction of older people. Also, the findings imply
10 differences in the relative importance of demographic variables in regard to
11 satisfaction with areas of body parts.

12 Results also showed relationships between social participation and clothing
13 attitude, sex and fashion opinion leadership, sex and shopping interest, sex and
14 satisfaction with shopping, and income and clothing expenditure. From these results,
15 we can conclude that the relative importance of the demographic variables varies with
16 regard to different dimensions of clothing behavior. Because of the variation in the
17 relative importance of demographic variables, more investigation with a larger sample
18 size is needed to address the influence of each demographic variable on each
19 dimension of body-cathexis and clothing behavior.

20 The results of this study imply that the elderly population is not an isolated
21 segment in that the elderly subjects differed little in their attitudes as compared to

1 what is known about the younger population. Since today's culture considers the thin,
2 young body ideal, older people may be affected by this phenomenon and care about
3 their bodies and appearance. Therefore, elderly people's body-cathexis can affect their
4 self-esteem and clothing behavior. In this context, the findings of this research showed
5 that older people's body satisfaction is closely related to their self-esteem and clothing
6 behavior. Therefore, body-cathexis is an important concept in the study of self-esteem
7 and clothing behavior of older people. The findings on the importance of body-
8 cathexis of older people can contribute to the body of knowledge concerning the
9 elderly since there are almost no studies about the impact of body-cathexis of older
10 people.

11 The close relationships between body-cathexis, self-esteem, and clothing
12 behavior of older people are important to apparel manufacturers and marketers
13 because older people who suffer dissatisfaction with their bodies may try to
14 compensate through their clothing choices. Research on clothing design and on
15 marketing strategies is needed to provide information that can be used to address the
16 clothing needs of older consumers. Because elderly people do experience body
17 changes and their body image can affect their self-esteem, educational programs and
18 assistance from family educators are needed to help older people recognize how they
19 can accommodate and negotiate their body changes to sustain or raise self-esteem.

20 This study has implications for future research. First, this study showed a
21 positive relationship between body-cathexis and clothing attitude. However, Shim et

1 al. (1991), in their study of male subjects aged 18 years and older, noted that the
2 relationship between body-cathexis and clothing attitude was not uni-dimensional.
3 More investigations regarding the validity of the clothing attitude scale are needed
4 because the scale focuses on the work environment rather than general social
5 interaction situations. Also, studies on the relationship between body-cathexis and
6 clothing attitude are needed to determine the dimensionality of the relationship with
7 diverse subjects.

8 Secondly, because there are relationships between satisfaction with certain
9 areas of body parts and certain dimensions of clothing behavior, more research on
10 aspects of body-cathexis is needed. Although each area of body-cathexis has its own
11 special characteristics, there are very few studies regarding various aspects of body-
12 cathexis. No absolute standard exists for categorizing body parts, and women and
13 men may have different points of view about the categorization of their body parts.

14 Finally, in this study, income was the only demographic variable which was a
15 significant determinant of clothing expenditure. The importance of income has been
16 documented, but other demographic variables also have been shown to influence
17 clothing expenditure. This research used data grouped by level of income and clothing
18 expenditure, rather than their actual dollar values. Studies using actual income and
19 clothing expenditure values and using larger samples should be conducted to
20 investigate relationships between demographics and clothing expenditure for the older
21 population segment.

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SELF-ESTEEM

Self-Esteem items (Cronbach Alpha 0.93)

On the whole, I am satisfied with myself.
I feel that I have many good qualities.
I take a positive attitude toward myself.
I am able to do things as well as most people.
I am a person of worth.
I feel I do not have much to be proud of.
At times I think that I am no good at all.
I am inclined to feel that I am a failure.
I wish that I could have more self-respect for myself.
Certainly, I feel useless at times.

CLOTHING BEHAVIOR

Clothing Attitude items (Cronbach Alpha 0.68)

Clothing is valuable to me.
Wearing proper clothing helps me gain respect.
Clothing is of concern to me.
Dressing well is important for advancement of one's career.
A person's reputation at work is affected by how he/she dresses.

Fashion Opinion Leadership items (Cronbach Alpha 0.84)

My friends or neighbors regard me as a good source of advice on clothing fashions.
I often influence the types of clothing fashions my friends buy.
Others often turn to me for advice on fashion and clothing.

Ready-to-Wear Satisfaction items (Cronbach Alpha 0.91)

Purchased clothing just doesn't fit me the way it used to.
My purchased clothes usually must be altered in order for them to fit me.
The waistline in purchased clothing does not fit comfortably on my waistline.
The crotch in purchased pants does not fit properly.
Often purchased clothing is too binding around my shoulders or arms.
Often purchased clothes seem too baggy in the top.
Many purchased clothes do not fit properly.
It is difficult for me to find clothing styles that are suitable for informal everyday wear.
It is difficult for me to find clothing styles that are suitable for social occasions.
It is difficult for me to find clothing styles that are suitable for evening or formal wear.
Clothing styles sold in stores do not have enough variation...they all look the same.
Clothing styles sold in stores seem unbecoming for my figure.
Clothing styles sold in stores seem too youthful.
In general, clothing styles sold in stores seem unattractive on mature people.

Shopping Interest items (Cronbach Alpha 0.74)

I enjoy browsing for clothes even when I am not out to buy anything.
In general, I find shopping for clothes enjoyable.

Shopping Satisfaction items (Cronbach Alpha 0.72)

I have more difficulty in shopping for clothing than I used to.
Salesclerks in clothing stores are usually too aggressive...too pushy.
Salesclerks in clothing stores should provide more assistance.
The layouts of clothing stores are often confusing...it is difficult to find what I want.
Clothing stores should provide more places to rest.
The lighting in clothing stores is usually not adequate.
I have a difficult time with transportation to and from clothing stores.

Store Patronage items (Cronbach Alpha 0.86)

I like to buy most of my clothes in a particular store.
I buy my clothes at a particular store as a matter of preference.

Personal Annual Clothing Expenditure

1 of 6 expenditure ranges from "under \$199" to "\$1,000 and over."

Figure 1. The self-esteem and clothing behavior variables analyzed in relation to body cathexis.

1 Table 1
2 Description of respondents and U. S. population

Variables	Respondents		U. S. population aged
	Frequency	Percentage	55 years and older Percentage
<u>Age</u>			
55-64	65	45.7	39.8
65-74	52	36.6	34.6
75 and over	25	17.7	25.6
<u>Marital status</u>			
Married	98	69.0	64.2
Not married	44	31.0	35.8
<u>Education</u>			
Grade school or less	29	20.4	32.7
High school	63	44.3	40.5
Beyond high school	50	35.3	26.8
<u>Income</u>			
Under \$9,999	12	8.5	8.1

Variables	Respondents		U. S. population aged
	Frequency	Percentage	55 years and older Percentage
\$10,000 to	19	13.4	20.6
\$19,999			
\$20,000 to	29	20.4	20.7
\$29,999			
\$30,000 to	30	21.1	14.5
\$39,999			
\$40,000 and above	52	36.5	36.1

1

2 Note: The U.S. data are from Statistical Abstract of the United States. 112th ed., U.
3 S. Bureau of the Census, 1992. Washington, DC: U. S. Government Printing Office;
4 and Current Population Reports, Series P-60, No. 180, U. S. Bureau of the Census,
5 1992.

1 Table 2

2 Body cathexis/self-esteem relationship: Pearson correlation coefficients and Fisher's

3 Z_r transformation scores

Correlation variables	Correlations			
	Entire sample	Men	Women	Fisher's Z_r
Body-cathexis/self-esteem	.67**	.52**	.77**	2.772**
Lower body/self-esteem	.56**	.52**	.56**	0.354
Upper body/self-esteem	.62**	.45**	.72**	2.610**
Height/self-esteem	.48**	.56**	.39**	-1.279
Weight/self-esteem	.35**	.15	.43**	2.665**
Torso/self-esteem	.58**	.44**	.64**	1.800

4

5 ** $p < .01$

1 Table 3

2 Body-cathexis/demographics regression coefficients

Independent Variables	Dependent Variables (Body-Cathexis)					
	All Areas	Lower- body	Upper- body	Height	Weight	Torso
Sex	3.44*	1.53**	0.09	0.14	1.08*	0.58
Income	1.88**	0.59**	0.37	0.09	0.58**	0.24
Age	0.03	-0.06	0.03	0.02	0.06	-0.02
Marital status	0.70	0.79	-0.53	-0.06	0.08	0.42
Social Participation	2.32*	0.10	0.88*	0.23	0.81*	0.29
Education	4.52**	0.68	1.88**	0.88**	0.31	0.77*
R ²	0.39	0.33	0.30	0.19	0.29	0.24

3

4 **p<.01 *p<.05

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