Body Cathexis: An Investigation of Sex and Age Differences and its Relationship to Total Self Concept

by

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ABSTRACT

Body Cathexis is the degree to which an individual is satisfied or dissatisfied with the various parts, processes, and functions of his/her body. Previous research in this area has provided inconsistent results with respect to sex differences on measures of body cathexis, while age differences have received practically no attention. The existence of a positive, significant relationship between self concept and body cathexis has been clearly established among male and female university undergraduates, but this relationship has not yet been tested out with non-students of different ages.

In the present study, body cathexis was investigated among non-student young (25-35 years), middle-aged (45-55 years), and senior (65 years and over) men and women. The relationship between self concept and body cathexis was also examined. Questionnaire sets were distributed to volunteer participants (all of whom were involved in some type of physical activity) in each of six groups: young male, young female, middle-aged male, middle-aged female, senior male, senior female. Each questionnaire set included: (1) a questionnaire designed by the author to elicit demographic data, and information as to how an individual spends his or her leisure time, (2) the Tennessee Self Concept Scale, (3) Jourard and Secord's Body Cathexis Scale, and (4) a scale, similar to Jourard and Secord's Body Cathexis Scale, designed to elicit information as to how important an individual perceives various parts, processes, and functions of his body to be.

The major results of this study are summarized below.

(1) The positive and significant relationship previously

demonstrated between self concept and body satisfaction was confirmed among four of the six groups in this study. A tentative explanation as to why this relationship did not hold true for middle-aged males and female senior citizens is discussed.

(2) Although neither sex nor age was found to have a significant effect on several Body Cathexis Scores, it is suggested that the homogeneity of the total sample with respect to the sample-wide involvement in some kind of physical activity may actually have suppressed any potential sex or age differences that may exist in the general population.

(3) Contrary to previously reported results that women "draw finer evaluative distinctions about the various aspects of the body" (Kurtz, 1969, p. 626) and thus show more overall variability in their responses on body cathexis scales than do men, this study found no significant differences between men and women in this regard.

(4) Providing further support to previously published results, perceiving oneself as overweight was found to have a general negative effect on one's level of satisfaction with one's body.

(5) Those five items considered most important most frequently revealed some interesting differences between males and females, especially as related to the aging process.

(6) For both males and females, general body build or shape seems to be most important to self esteem, whereas facial features do not appear to play an important part.

Limitations of the present study are discussed and recommendations for further research are offered.

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INTRODUCTION

Interest in the study of the relationship between mind and body can be traced as far back as the early Greek philosophers. However, it was not until the early 1900's that serious attention was paid to personal body image. This was done by the British neurologist, Henry Head, who put forward a fairly elaborate theory.

Interested not only in the physiological events related to neurological deficit or loss, Head, and several other neurologists following him, became fascinated with the concept of body image, and the various body attitudes and feelings of those who suffered certain neurological problems. On the basis of his observations, Head suggested that each individual gradually develops a picture or model of himself which becomes a standard against which all body movements and postures are judged. For Head, every new stimulation or sensation was automatically brought into relation with this organized model of the personal body, and the relation that was established between stimulus and model gave rise to recognition of the meaning of the stimulation. Without such a model, Head did not feel that the individual would be able to change from one posture to another in a coherent way. Moreover, he proposed that this model or schema of the personal body was not fixed, but could in fact incorporate sensory data and reorganize itself appropriately.

Head maintained that body schemata were nonpsychological in nature and specifically stated that their use by the person occured solely on the physiological level, functioning outside of consciousness. Head's thinking eventually stimulated the analysis of many neurological

syndromes in body image terms as researchers sought to determine the relationships between types of disorders and location of neurological damage.

Apart from the philosophical and neurological contributions to the study of personal body experience, there are sufficiently well-developed theoretical bases for psychological concern with the study of body perception. The psychological research that presently exists can be broadly classified into two groups--research that has a perceptual orientation, and research that is oriented toward the study of personality processes (Schontz, 1969). Schontz has suggested that perceptual research, as the study of the individual's experience of the spatial-geometric properties of the personal body, with its primary concern being for judgement accuracy, be identified with the term 'body schemata'. Although the perceptual research has made significant contributions to the overall understanding of personal body perception, it was the intent of this author to focus attention on the second group of studies, those oriented toward the study of personality processes.

Personality-oriented research, according to Schontz (1969), is concerned with what is commonly called the body image, i.e. "the personal body as a dynamic component of personality" (p. 6). While Henry Head, the neurologist, is generally regarded as the pioneer of the study of body experience, he was not concerned with personality and thus, in describing body schemata, wrote solely of physiological organizations and the perception and localization of stimuli. In 1935, Schilder moved the discussion of body experience to another theoretical level when he proposed that "there is no body image without personality" (p. 15). Schilder explained that "when we perceive or imagine an object, or when

we build up the perception of an object, we do not act merely as a perceptive apparatus. There is always a personality that experiences the perception" (p. 15). This postulation of active perceiving mental entities allows for the introduction of psychodynamic constructs, i.e. the body ego and its components.

The importance of the body as a component of and influence upon the personality of the individual has been considered in detail by numerous theorists. Freud, and others who have followed in the psychoanalytic tradition, have made considerable efforts to integrate body image constructs into their theoretical systems. In terms of ego formation, Freud advanced that a child initially acquires a basis for discriminating between the outer world and his own body through learning to integrate sensations from his body surface. Fenichel (1945) explains that

> in the development of reality the conception of one's own body plays a very special role. At first there is only the perception of tension, that is, of an "inside something". Later, with the awareness that an object exists to quiet this tension, we have an "outside something". One's own body becomes something apart from the rest of the world and thus the discerning of self from nonself is made possible. The sum of the mental representations of the body and its organs, the so-called body image, constitutes the idea of I and is of basic importance for the further formation of the ego. (p. 35)

Once the fundamental distinction between internal and external realities has been made, the stage is set for "the growth of self-awareness, the ultimate equation of the self with the body, and the establishment of a sense of personal identity" (Schontz, 1969, p. 165). Witkin (1965) suggests that the "achievement of a differentiated body concept is a manifestation of the child's general progress toward psychological differentiation" (p. 26).

Freud's conception of the development of sexuality would also appear to be body image oriented. His theory of libido and of erogenous

zones is stated almost entirely in terms of body zones and areas of body sensitivity, and one may identify the passage through the oral, anal, phallic, latency, and genital stages, with progressive elaboration and repression of different portions of the body image. Freud has discussed the concept of fixation at various stages and has suggested that if libidinal fixation does occur in a given erogenous zone, that zone may then take on a disproportionate influence in the total body scheme and produce distortions of various sorts. Certainly it would seem that body image concepts are one of the cornerstones of Freud's theoretical system.

Adler's theoretical formulations, although not explicitly concerned with body image, are full of descriptions of personality dynamics that are rich with implicit body image references. His concept of organ inferiority and an individual's subsequent attempt to compensate for same through neurotic or otherwise maladjusted behavior certainly has body image connotations. In the words of Fisher and Cleveland (1958), Adler has suggested that "when an individual has a morphologically inferior organ or an organ which is below par for functional reasons, that individual develops generalized feelings of inferiority and tries to compensate for the 'defect' by use of another organ or by intensified use of the inferior organ itself" (p. 46). Fisher and Cleveland suggest this may be similar to saying that when an individual perceives an aspect of his body as inferior he then generalizes this inferiority to his total concept of himself. One organ may take on exaggerated importance and perceived size relative to the rest of the body scheme, and subsequently exert a generalized distorting effect.

Although their complete theoretical systems differ considerably,

both Jung's followers and Otto Rank have discussed at length the idea that in response to stress individuals may seek to convert their bodies into some kind of container analogous to the 'mother container' or womb. That is, individuals may seek security in visualizing their bodies as having invulnerable walls. Fisher (1970) has discussed and investigated extensively the notion of body boundary as an important aspect of overall body image.

Wilhelm Reich has discussed the complex interaction between an individual's personality conflicts, the individual's expressions of these conflicts in patterns of muscle tonus, and the repercussions of these tonus patterns upon the individual's way of experiencing himself and others. Thus, Reich has proposed a system wherein 'mental conflict' has a direct effect on the 'physical self' which in turn exerts an effect back on how an individual experiences himself and others.

As the originator and developer of Gestalt Therapy, Fritz Perls emphasized that the organism always works as a whole, stressing that the body cannot be considered separately from the self. Any emotion that is experienced subjectively is inevitably accompanied by some type of muscular movement, implying that an emotional existence can only be understood as it is related to a physical existence. Perls has suggested turning one's attention to one's physical existence to generate internal support in times of boredom or anxiety.

Clinicians interested in personality have also concerned themselves with problems of body image in patients with physical illnesses and disabilities, or somatic anomalies. Others have studied perception of the personal body from a developmental perspective, as a source of theoretical and practical concern.

The various theoretical formulations indicating the importance of body image as a crucial component in the development of personality, have led to a series of studies investigating the relationships between aspects of personal body perception and personality traits or dynamic characterisitcs. The personality-oriented body perception research has generally attempted to measure a subject's experience of his body as a conscious or unconscious, value-loaded phenomenal entity, rather than an individual's accuracy in determining spatial-geometric properties of his personal body.

One of the earliest empirical attempts to relate personality variables to the physical body was made by Sheldon in the early 1940's. Proposing that personality was an extension of an individual's biological structure as represented by his somatotype, Sheldon conducted an extensive study and reported significant correlations between body type or physique and temperament (ectomorphy-detached; mesomorphy-energetic; endomorphy-relaxed). Attempts to replicate Sheldon's results have generally been unsuccessful but Sugarman and Haronian (1964) point out that most of the subsequent studies employed inappropriate or unsophisticated procedures to determine somatotype.

In Sheldon's work, body type was determined by a set of objective measures, and Sheldon did not attempt to elicit subjective reports of satisfaction or dissatisfaction with one's particular physique. Thus, he did not discuss the subjective desirability of having one specific body type rather than another. Numerous studies have since confirmed the existence of stereotyped behavioral descriptions relating physique to social image (Brodsky, 1954; Kiker & Miller, 1967; Staffieri, 1967; Sleet, 1969; Kirkpatrick & Saunders, 1978). Even though different

researchers used significantly different populations (i.e. populations differed by age, sex, occupation) to rate or judge the different body types, the mesomorphic figure was overwhelmingly and consistently viewed as most positive while the endomorph was inevitably viewed as most negative.

Staffieri (1967), who had used six to ten year old children to rate silhouettes of the three different body types, suggested that

> it is reasonable to assume that the individual who is the recipient of statements which are based on another person's perception of his body is likely to incorporate these perceptions into his own body concept. As a direct result of an individual's body configuration, he typically receives rather consistent reactions from others. These reactions thus provide a framework for his body concept, which becomes a significant part of the total self concept. (p. 101)

Certainly from a social learning theory perspective, one would expect that the regular and consistent reactions from a child's parents and peers concerning his body shape and size would have a strong impact on the child's personal perception of his own body. The fact that Staffieri found the young children in his study to show a clear preference to look like the mesomorph image, regardless of their actual body type, would indicate that at an early age, children have a definite sense of which body configuration is likely to elicit the most societal and parental approval.

Several studies with adult populations have generally found that those with a mesomorphic or average body build are most satisfied with their bodies while those with an endomorphic build are least satisfied (Sugarman & Haronian, 1964; Kurtz, 1966; Meeker, 1978). Certainly within our North American culture the ideal body configuration for males is portrayed as a mesomorphic figure, while for females it appears to be a mesomorphic bordering on an ectomorphic figure. Thus, it is not

unexpected that those with body configurations that differ substantially from the cultural 'ideal' would experience a greater degree of dissatisfaction with their bodies.

Many authors have discussed the importance of a healthy body image for a healthy total self concept, thus implying the existence of a theoretically significant relationship between the two. Fisher and Cleveland (1965) have suggested that through studying an individual's attitudes and feelings toward his body, we may be able to gain an increased understanding about his overall self concept. Fisher and Cleveland explain that

> With increasing study of body image phenomena we have learned that the normal individual's attitudes toward his body may mirror important aspects of his identity. An individual's feeling that his body is big or small, attractive or unattractive, strong or weak, may tell us a good deal about his self concept or his typical manner of relating to other people. There is evidence that the individual has a unique way of perceiving his own body image as contrasted to non-self objects. As such, this body image or body concept frequently serves as a screen or target upon which he projects significant personal feelings, anxieties and values. (p. 48)

Like the notion of 'self concept', 'body image' is a complex construct that defies simple definition. Whereas self concept has been the subject of extensive investigation in the psychological community, body image has not received nearly the same comprehensive, organized attention. Witkin (1965) describes the body image as representing the individual's systematic impression of his body which forms over the course of his development. He suggests that this impression is both cognitive and affective, and may be realistic or unrealistic.

In their efforts to further define and assess body image, investigators have focused their attention on a wide variety of body-related attitudes and behavior. The Draw-a-Person Test (Machover,

1949) has been used extensively as a global measure of the body image. Figure drawings have also been used (1) as evidence of how subjects perceive or are influenced by the spatial-geometric features of their own bodies (Apfeldorf & Smith, 1966; Lasky, 1974; Gellert, 1967,1968; Silverstein & Robinson, 1961); (2) as indices of degree of differentiation and level of sophistication of the body image (Fisher, 1959; Witkin, Lewis, Hertzman, Machover, Meissner & Wapner, 1954; Sugarman & Haronian, 1964); (3) to assess a variety of personality characteristics, particularly in persons with physical disabilities (Wysocki & Whitney, 1965; Babin, 1975; Dimond & Hirt, 1973; Wachs & Zaks, 1960); and (4) in subjects under the influence of drugs (Silverstein & Klee, 1958). Recently however, several researchers have suggested that experimental support for the use of figure drawings in regard to body image is seriously lacking (Apfeldorf, Smith, Peixotto, & Hunley, 1974).

One's ability to select a picture or construct a model that closely resembles oneself has been used as a measure of body image in numerous studies (Schonbuch & Schell, 1967; Rowe & Caldwell, 1963; Adams & Caldwell, 1963; Gellert, 1975; Stiles & Smith, 1977). Fisher and Cleveland have discussed and researched extensively the notion of body boundary--the psychological structure which separates and protects the self from the environment--as an important component of the body image (Fisher & Cleveland, 1958, 1965; Fisher, 1970). Fisher (1970) has also conducted some preliminary research into level of present body awareness, suggesting that this too may be an important aspect of body image.

Body discomfort and somatic concern have been discussed as

representing further elements of this same construct (Plutchik, Bakur-Weiner & Conte, 1971, 1973; Secord, 1953; Hirschenfang & Benton, 1966), while Secord and Jourard (1953) have advanced that feelings of satisfaction or dissatisfaction with the body play an important part in determining one's overall body image.

Given the diverse directions in which the body image research has moved, and the vagueness and complexity of the concept, it is not surprising that one is unable to find a widely accepted means by which to measure an individual's overall body concept. Schontz (1969) has suggested that the concept of the body image may be something like the concept of intelligence, in that it is composed of several attitudes and expectations regarding the body which influence behavior in several different ways, just as intelligence is composed of several qualitatively different abilities, each of which must be measured separately. Thus Schontz has proposed that "a definitive identification of body image could be achieved through carefully devised, large-scale factor analytic research" (p. 180). Perhaps in time such an extensive project will be undertaken, and a battery of tests will be made available that will provide a complete assessment of this complex construct.

In the meantime, however, there is certainly a great deal to be learned with respect to several of the above mentioned individual aspects of body image. Of particular interest to this author are a series of studies that have investigated an individual's level of satisfaction with his or her body. Body satisfaction is defined simply as the degree to which an individual experiences positive or negative feelings about various parts and processes of his body. There can be

little doubt that feelings about the body have marked behavioral consequences both in clinical and nonclinical settings. Within our society, we see that many individuals devote great amounts of time and energy to the grooming and modification of their body structure and appearance. This widescale modification of body structure and appearance may reflect a general dissatisfaction with the body as it is, especially among those who strive to imitate the media-promoted body ideals.

Relationship Between Self Concept and Body Cathexis

The proposed theoretical relationship between self concept and body concept has been empirically investigated through the use of measures of body cathexis (or satisfaction) as representative of an important aspect of body concept, and general measures of self concept. Secord and Jourard (1953) were the first to empirically explore this relationship between body satisfaction and self concept, using their own Body Cathexis and Self Cathexis Scales. Their initial Body Cathexis Scale, as a measure of satisfaction with the body, was composed of 46 parts, processes and functions of the body, each of which subjects were requested to rate on a scale of 1 to 5 in terms of how satisfied they were with that part, process, or function. These 46 items had been chosen for the final form after items difficult to understand, or which resulted in little variability from subject to subject were eliminated. Organs pertaining to sexual or excretory functions were omitted because it was feared that their presence might give rise to an evasive attitude.

Secord and Jourard's (1953) Self Cathexis Scale, as a measure of

general self esteem, consisted of 56 self items (i.e. artistic talents, intelligence level, self discipline, etc.) each of which subjects were asked to rate on a five point scale in terms of how satisfied they were with that item as it pertained to themselves. Using these two scales, Secord and Jourard reported significant correlations between body cathexis and self cathexis for males (r = .58, p < .01) and females (r = .66, p < .01) and a split-half reliability coefficient for the body cathexis scale of .81. No significant sex differences were found on either measure when comparing mean scores.

A significant modification was later made to this Body Cathexis Scale through the deletion of several items that had resulted in little variability from subject to subject, and the inclusion of four items pertaining to sexual and excretory functions (Jourard & Secord, 1955). Although these additional items might in fact arouse a certain degree of avoidance or evasion in some subjects, Jourard and Secord felt that one simply could not overlook their potential importance to one's overall personal perception of his/her body.

Using this modified Scale, along with the original Self Cathexis Scale, Jourard and Secord (1955) again reported significant correlations between Body Cathexis and Self Cathexis for males (r = .84, p < .01) and females (r = .68, p < .01). As before, no significant sex differences were discovered. Rosen and Ross (1968) have argued that there appeared to be a considerabale overlap in items on Secord and Jourard's Body Cathexis and Self Cathexis Scales and suggested that this may have spuriously inflated the correlations between the two measures.

Following Secord and Jourard's lead, a profusion of studies were conducted, all confirming this positive, significant relationship

between satisfaction with the body and satisfaction with the self (Rosen & Ross, 1968; Watkins & Park, 1972; Mahoney, 1974; Lerner, Karabenick & Stuart, 1973; Mahoney & Finch, 1976a; King & Manaster, 1977; Dujovne, 1973; Brunn, 1976; Kimlicka, 1978; Zion, 1965; White & Wash, 1965; Weinberg, 1960). For the most part, different researchers have used different measures of body satisfaction and of self esteem, thus diminishing the possibility that the empirically demonstrated relationship between the two is simply an artifact of the measures used.

Fisher (1970) has raised the concern that many of the measures used are vulnerable to social desirability effects, and therefore many of the fairly high positive correlations reported between self concept and body satisfaction may reflect their shared social desirability variance. Unfortunately, this is a potential problem with virtually all self report scales and questionnaires, and given the fact that an adequate, reliable measure of social desirability does not exist, there is, at present, no way to partial out the effects of this variable. Thus, one simply must keep it in mind when interpreting the results of this type of study.

In all but one (Brunn, 1976) of the studies which investigated the relationship between self concept and body satisfaction, the raw data has been gathered from male and female university undergraduates. Whether or not this relationship holds across different age groups in different subject populations is as yet unknown. Brunn (1976) did confirm this relationship in her sample of male and female institutionalized dependent and/or neglected adolescents, but beyond this single study researchers have restricted their attention to one specific sample population.

Body Cathexis: Sex and Age Differences

Also of interest to this author, and related to the study of satisfaction with the body, is the determination of potential sex and age differences. In the majority of cases, researchers have restricted their efforts to investigating differences between the sexes within a single age group. The available data, however, are extremely inconsistent. While several authors have reported no significant differences between male and female scores on scales of body satisfaction (Secord & Jourard, 1953; Jourard & Secord, 1955; Rosen & Ross, 1968; Lerner, Karabenick & Stuart, 1973; Goldberg & Folkins, 1974), Brunn (1976) and Howe (1973) both found males to be more satisfied with their bodies than females, while Kurtz (1966, 1969) and Sperling (1975) reported exactly the opposite.

It is noteworthy to point out that in those studies reporting no differences between males and females on scales of body satisfaction, the sample populations consisted solely of university undergraduates. Brunn (1976) and Sperling (1975) both studied adolescents while Howe's (1973) sample was comprised of adults ranging in age from 25 to 70 years. Thus, it may be that sex differences are related to age in some fashion. This relationship has not yet been fully clarified although Howe (1973) has begun to do so in her study of adult males and females in three different age groups. In her youngest age group (25-35 years), males scored significantly higher on a scale of body satisfaction than did females and in the middle age group (45-55 years) this same relationship held although scores were generally lower than those of the younger group. In the oldest group (60-70 years), differences between males and females disappeared as females' scores rose to the level of

the males'.

Although age differences in the sample populations may account for some of the inconsistency in the sex differences data, another possibility may be that the body satisfaction scales do not measure the same thing for males and females. Mahoney and Finch (1976b) have, in fact, reported somewhat different factor structures for males and females on their scale of body satisfaction, thus suggesting that the two groups may evaluate body satisfaction along somewhat different dimensions. If that is the case, then perhaps one might be better able to compare male and female scores if each item in the scale is weighted according to how important an individual perceives that item to be.

Although such a weighting procedure has been used in several studies investigating the relationship between body satisfaction and self esteem (Rosen & Ross, 1968; Watkins & Park, 1972; Lerner, Karabenick & Stuart, 1973), this has not yet been done in examining sex differences. This may prove to have been a significant oversight. Although Mahoney (1974) clearly demonstrated that the statistical relationship between body satisfaction and self esteem was not significantly altered one way or the other through taking the subjective importance of the individual items into account, this has yet to be determined for investigating differences between males and females on body satisfaction scores.

Apart from the one study by Howe (1973) mentioned above, age differences, with respect to body satisfaction, simply have not been examined to any extent. As the body experiences various physiological changes while one passes from youth through middle age to old age, do individuals become less satisfied with their bodies, or do they maintain

a fairly constant level of satisfaction? Or, does the involvement with and/or importance of the body and its various parts and functions change? Furthermore, do females respond to this aging process differently than males in terms of how they feel about their changing bodies? Although Howe has offered some preliminary answers to these questions, confirmation of her results through subsequent replication has not yet been accomplished.

Differential Importance of Individual Body Aspects

Since the development of Secord and Jourard's (1953, 1955) scale of body cathexis or satisfaction, researchers have expended considerable effort searching out relationships between body satisfaction and numerous other variables including: body type (Sugarman & Haronian, 1964; Kurtz, 1966); weight (Lasky, 1974; Meeker, 1978); negative emotional attitudes (Goldberg & Folkins, 1974; Morgan, 1975; Eichler, 1973); enjoyment of sexual activities (Eichler, 1973; Latorre & Borgeson, 1975); performance in an academic setting (Schomburg, 1975; White & Wash, 1965) and in a job interview (King & Manaster, 1977); and physical activity (Jeffers, 1977; Vincent, 1976; Tillman, 1965; Snyder & Kivlin, 1975; Snyder & Spreitzer, 1976). Surprisingly little attention has been paid, however, to differential responding within the measures of body satisfaction themselves. For example, are certain items more salient to males than to females and vice versa; are different items more important to different age groups, etc?

As mentioned above, Mahoney and Finch (1976b) have reported somewhat different factor structures for males and females on their scale of body satisfaction, leading one to question whether different

sets of items are more relevant to one's total body satisfaction for the two sexes. The scale used by these authors is composed of a list of body aspects (22 for men, 20 for women) which does not include any body processes or functions, nor any items pertaining to sexual or excretory functions. Subjects were requested to rate each aspect on a 5 point scale of satisfaction-dissatisfaction. Although these authors refer to this as "a standard body cathexis questionnaire" (1974, 1976a, 1976b), nowhere have they reported reliability or validity data. Notwithstanding this lack of reported statistical data on their measure, Mahoney and Finch have noted some interesting findings.

A principal components analysis of the responses to the individual scale items revealed that while a factor labelled as "face" (comprised of the following scale items: facial features, eyes, nose, teeth) accounted for the largest percentage of the variance for males, a factor labelled as "weight" (hips, weight, thighs, waist) accounted for the largest percentage of the variance for females. Among the males, the second most important factor was identified as "legs" (thighs, calves, leg shape, knees), while among the females, it was found to be "face" (lips, voice, eyes, hair color, facial features, nose, teeth). "Weight" (waist, weight, hips) was third for males while "height" (height, leg length, bust) was third for females.

Although Mahoney and Finch (1976b) used a relatively small sample for such an analysis (98 males, 128 females) their results do suggest that males and females may draw on different body aspects to determine their satisfaction with their bodies. Unfortunately, few researchers have attempted to confirm and clarify this observation. One possible approach may simply be to have each subject rate how important each body

aspect or characteristic is, and then examine the responses for basic group differences. Furthermore, this method could be applied to investigating differences among various age groups.

Lerner, Karabenick and Stuart (1973) employed a similar methodology with male and female undergraduates, but requested that subjects rate each scale item in terms of how important it was in determining how physically attractive they were. The scale used in this study was Rosen and Ross's (1968) 24-item Body Satisfaction Scale, which does not include any body processes or functions, nor any items pertaining to sexual or excretory functions. Test-retest reliability of .84 has been reported (Rosen & Ross, 1968).

Lerner et al. (1973) found that both males and females rated the importance of the various body parts in a markedly similar way. That is, both sexes rated general appearance, face, weight distribution, facial complexion, and body build to be the most important items for determining physical attractiveness.

While one cannot deny the importance of physical attractiveness as a part of how an individual perceives his total personal body, this author would contend that it alone does not account fully for the way a person feels about his or her body. Thus, I would suggest that researchers who ask subjects to rate their satisfaction with, or the perceived importance of individual body parts based solely on the appearance or attractiveness of those parts, are perhaps missing crucial determiners of overall satisfaction with the body. Certainly, the perceived effectiveness, and/or functioning capacity of various body parts could have a substantial impact on how satisfied a person is with those body parts. Furthermore, to neglect altogether items that

pertain to body processes and functions (and especially to sexual functioning) is to neglect potentially very important contributors to body satisfaction or dissatisfaction.

As noted above, little effort has been made to examine ratings of importance of various body parts or aspects. To do so could provide a means to investigate which body parts are considered most important (in a general, unrestricted sense) to different groups (by age or sex).

Differential Relationships Between Self Concept and Cathexis for Individual Body Aspects

Related to this notion, two attempts have been made to assess the differential contribution of cathexis for specific body aspects to self esteem among males and females (Lerner, Karabenick & Stuart, 1973; Mahoney & Finch, 1976a). Although there certainly is some value in conducting such analyses, one must bear in mind that the strictly correlational nature of the relationship between body satisfaction and self esteem prohibits one from concluding either that satisfaction with specific body aspects contributes to self esteem, or that self esteem contributes to satisfaction with specific body aspects.

Nevertheless, Lerner et al. (1973), examining zero order correlations between satisfaction with individual body parts, and self concept scores, reported fairly similar results for males and females. Items such as facial complexion, distribution of weight, waist, nose, body build, face and thighs all correlated highly with self concept scores for both sexes. However, it should be noted that Lerner et al. specified that subjects should rate their satisfaction with the appearance of the 24 items on the body satisfaction scale, and thus the

interpretation of the body satisfaction scores is necessarily restricted. Given the specific items listed above, the results may suggest that among both males and females, a positive relationship exists between satisfaction with the self-perceived appearance of the body shape and face, and self esteem. Clearly these findings would be supported by the previously demonstrated positive relationship between physical attractiveness and self esteem.

Mahoney and Finch (1976a) pointed out that if satisfaction with body aspects is intercorrelated between various body aspects, then one "cannot ascertain the relative contribution of any given body aspect to self concept by use of the zero order correlation coefficients alone" (p. 252). Suggesting that intercorrelation was quite likely to occur, they advised the use of multiple stepwise regression techniques for dealing with the question of differential contribution. Employing such a procedure themselves, Mahoney and Finch found that for males, that body aspect which contributed most to explaining variance in self esteem was voice, while for females, overall physical attractiveness was the single aspect that accounted for most of the variance in self esteem. For both sexes, after the deletion of all negative suppressor variables from the regression formula, the few body aspects left contributed only minimally.

Certainly these results differ considerably from those of Lerner et al. There are clear sex differences, and although females may interpret the single item "overall physical attractiveness" to incorporate body shape and face, there is a notable absence of items pertaining directly to weight, body shape, and facial features for both sexes. Based on the literature that has investigated the relationship between physical

attractiveness and self esteem, combined with the ever present, media-promoted 'ideal body', one might expect these very items to be more highly related to self esteem. At the same time however, Mahoney and Finch (1976a) did not restrict subjects to respond in terms of their satisfaction with the appearance of body aspects, but rather, allowed them to respond in terms of their satisfaction in general with the body aspects presented. This different orientation in the instructions given to subjects might account largely for the disparity in results between this study and that of Lerner et al. (1973).

Obviously these two studies alone do not clearly define the nature of the relationship between satisfaction with individual body aspects and self esteem. The results of the Mahoney and Finch (1976a) study are difficult to explain and in fact, raise more questions than they answer. Data has been gathered solely from university undergraduates, thus restricting the generalizability of the findings, and the measures used are blatantly lacking in items pertaining to sexual organs and body processes and functions. Until further research is conducted, taking into account the concerns noted above, our knowledge about the precise relationships between satisfaction with various body aspects, and self esteem will remain limited.

In summary, while research on satisfaction with the body has extended in various directions since Jourard and Secord (1953, 1955) first introduced their empirical scale of such, there continue to be some important gaps and inconsistencies in the literature. The present study is intended to fill some of these gaps, and hopefully clarify some of these inconsistencies. More specifically, this study attempts to

provide further information in what this author considers to be three important areas concerning body satisfaction.

1. Although a positive, significant relationship between body satisfaction and self concept has been previously demonstrated among numerous samples of male and female university undergraduates, this relationship has not yet been shown to hold among different age groups in different sample populations. Thus, this study investigates the relationship between body satisfaction and self concept in different age groups in a non-university student population.

2. To date, numerous studies investigating sex differences on measures of body satisfaction have produced inconsistent results. This author has suggested that these inconsistent results may be accounted for by the fact that males and females evaluate satisfaction with their bodies along different dimensions, i.e. certain body aspects may be more important to one sex, while others may be more important to the opposite sex. In this study, each subject is asked to rate his or her perceived importance of each body aspect. Satisfaction ratings are then weighted according to these importance ratings, so that the overall body satisfaction score takes into account the differential importance of the individual items. Sex differences are then examined using these weighted body satisfaction scores. Age differences, previously ignored for the most part, are also examined in a similar manner.

3. An analysis of the importance scores across sexes and age groups is carried out in an effort to determine which specific body aspects are considered most important to the different groups. This type of analysis has not yet been done, and this author feels that such an analysis can provide important information about the way in which

different sexes and different age groups value different aspects of their body.

Although not a main part of this thesis, an exploratory analysis is also done in an effort to clarify the differential relationships between various aspects of body satisfaction, and self concept, among the different sexes.

METHOD

Subjects

Subjects for this study were recruited, on a voluntary basis, through a public recreational center and a private multi-activity club. Thus, all subjects were involved in some type of physical activity. Subjects included both males and females from each of three different age ranges: 25-35 years, 45-55 years, 65 years and over. These particular age ranges were chosen to roughly represent three stages of adult life, i.e. young adult, middle age and senior citizen. By leaving a gap of ten years between the age ranges, it was expected that overlap between the three stages would be minimized. The total sample of 164 participants included 30 male and 30 female young adults; 27 male and 25 female middle-aged adults; 23 male and 29 female senior citizens.

Although it was initially intended that all data be gathered through the public recreational center, there were insufficient numbers of male and female middle-aged adults and senior citizens using that center at the time the data was collected, to fill the cells of the design. Thus, it was necessary to seek out participants from another facility, namely, the private multi-activity club. Appendix A provides a breakdown, by sex and age, of the number of subjects from each of these two recreational facilities. It should be noted that both males and females in the middle-aged and senior groups were recruited from both the public and the private facility.

With respect to the variety of activities available through the two facilities, there are marked similarities, but also some differences. The public facility offers the following: a pool, indoor and outdoor

tracks, tennis courts, weight room, general exercise rooms, lawn bowling. The private facility offers a pool, tennis courts, badminton courts, a general exercise room, shuffleboard, curling rinks, and a nine hole golf course. Membership in the private facility is not restricted by any of marital status, sex, age (although children can't join without their parents), religion, occupation, etc. Furthermore, apart from the initial share that must be purchased by members of the private facility, the monthly cost of using either the public or private recreational facility is comparable.

I would note at this time that the difficulty in filling all cells of the design through the public facility may simply reflect the fact that, in the general population, adults of different ages are inclined to participate in different types of activities. For example, while few senior citizens are joggers or tennis players, many are involved in lawn bowling and/or curling.

Some educational and occupational differences were found among the men and women of different ages. Appendix B (Table A) provides a breakdown of these differences between the six groups in the study. However, neither education nor occupational status was found to be a significant factor in any of the major statistical analyses performed in this study. Refer to Appendix B for a summary of the analyses performed to determine this.

The only criteria for participation in the study were that subjects be involved in some type of physical activity, fall into one of the age ranges described above, and be willing to give enough of their time to complete the materials used in this study (usually about 45 minutes).

Procedure

Through a public recreational center and a private multi-activity club, sets of questionnaires were distributed by the author to any persons (meeting the above criteria) interested in participating in this study. When given the questionnaire set or package, each volunteer subject was told by the author

> I am doing a study on how people, who are involved in some type of physical activity, perceive themselves. I would appreciate it if you would take this set of one questionnaire and three scales home with you, fill it out within the next two weeks, and then return the entire set to me in the prestamped, addressed envelope provided.

The first sheet of paper inside the package provided the subject with instructions as to how to complete the questionnaire and the three scales. A copy of these instructions is found in Appendix C. The 'Concluding Remarks', being the last sheet in each questionnaire set, is also found in Appendix C. The ordering of the scales within each questionnaire set was held constant for all subjects. However, given that subjects completed these questionnaire sets at home, there was no way to be absolutely certain that the individual scales would be completed in the order presented. Through the use of uniform instructions and uniform ordering of the scales, it was hoped that, across groups, the maximum uniformity possible with respect to completion of the individual questionnaire and scales (given that subjects completed them at home) would be achieved.

The questionnaire was comprised of a series of demographic questions (e.g. age, sex, height, weight), followed by a variety of questions designed to elicit information about the way in which an individual spends his or her leisure and recreational time (see Appendix D). Given that the data were collected from persons involved in some

type of physical activity, the latter set of questions were included to be used in a preliminary investigation into the relationships between type and amount of physical activity, and body cathexis and self concept.

The first scale was the Tennessee Self Concept Scale (Appendix E), a widely used and reliable measure of the self concept (see the Tennessee Self Concept Scale Manual, Fitts, 1965). This scale consists of 100 statements, each of which a subject is asked to rate on a 5 point scale according to how true or false the statement is as it pertains to him or herself.

Although many subscale scores, as well as a Total Self Concept Score, can be derived from the Tennessee Self Concept Scale (TSCS), the present study was concerned only with the Total Score, and the score on the Physical Self Subscale. The Total Score is deemed "the most important single score", reflecting the "overall level of self esteem". According to the administration manual for the scale,

> persons with high scores tend to like themselves, feel that they are persons of value and worth, have confidence in themselves, and act accordingly. People with low scores are doubtful about their own worth; see themselves as undesirable; often feel anxious, depressed, and unhappy; and have little faith or confidence in themselves. (Fitts, 1965, p. 2)

The Physical Self Subscale, comprised of 18 items, represents the individual's "view of his body, his state of health, his physical appearance, skills, and sexuality" (Fitts, 1965, p. 3).

The second scale in the set was Jourard and Secord's (1955) Body Cathexis Scale, a measure of satisfaction or dissatisfaction with the body (see Appendix F). This scale is comprised of a list of 40 parts, processes and functions of the body, each of which a subject is requested to rate on a 5 point Likert-type scale, according to how

positive or negative his feelings are with respect to that body part, process or function.

The Body Cathexis Scale was divided to yield two further scores, including a Satisfaction With Parts of the Body Score (24 items) and a Satisfaction With Functions of the Body Score (16 items). This was done so that satisfaction with parts and satisfaction with functions could be investigated separately. Although these are not standard subscales of the Body Cathexis Scale, it was anticipated that the previously determined reliability of the Scale would remain unaffected given that the entire Scale was administered in standard form. Face validity was established for the two subscales through the assignment of items, by the author, to one subscale or the other based on whether the item represented a part(s) of the body (including visible and measurable physical attributes, i.e. height, weight), or a function or process of the body. Given that completely objective criteria were used in assigning the items to one subscale or the other, the determination of inter-rater reliability was not necessary. See Appendix G for a complete list of the items assigned to each subscale.

On the third scale, each subject was requested to rate, on a 5 point scale, how important he considered each of the 40 listed parts, processes, and functions of the body to be (see Appendix H). In addition to the Total Importance Score, two subscale scores were calculated, these being Importance of Parts of the Body (24 items) and Importance of Processes and Functions of the Body (16 items). The same items were assigned to one or the other importance subscales as they had been for the corresponding Body Cathexis subscales.

Of a total of 263 questionnaire sets distributed, 209 were returned

to the author, representing a total return rate of 79.5%. For a breakdown of the return rates and the number of subjects in each group, refer to Appendix I. In that the questionnaire sets were not originally distributed evenly across the six groups of the study, only the first 30 correctly completed sets (or less in some cases) which were returned from each group, were subjected to statistical analysis. It should be noted that more than 30 correctly completed questionnaire sets were returned from each of the male and female young adult groups. However, less than 30 correctly completed questionnaire sets were returned from each of the other four groups (middle-aged male, middle-aged female, male senior citizen, female senior citizen).

In that both the rate of distribution of questionnaire sets to, and the rate of return of questionnaire sets from each of the six groups differed to some extent, cell frequencies were unequal. In a factorial analysis of variance design, unequal cell frequencies result in the fact that main effects and interaction effects usually are not independent of one another. In this study, in all factorial analyses of variance, the 'classical experimental approach' was used in partitioning the total sum of squares (corrected for mean) prior to testing the significance of the main or interaction effects (refer to Statistical Package for the Social Sciences, 2nd ed., 1975, p.405). That is, the portion of the sum of squares due to the additive effects of 'sex' and 'age' that was not accounted for by 'age' was assigned to 'sex', while the portion not accounted for by 'sex' was assigned to 'age'. Finally, that portion of the variance in the dependent variable not accounted for by 'sex' or 'age' separately, was assigned to the interaction of the two. In this way, the three effects were made orthogonal to one another prior to the

analysis.

Weighted Body Cathexis Scores were arrived at through a weighting procedure which took into account the rated importance of each body part or aspect, as well as the rated level of satisfaction with that part or item. A weighting procedure was adopted in this study in that previous research had suggested that males and females tended to evaluate body satisfaction along somewhat different dimensions. Although it has not yet been shown, this may also prove true for subjects of different ages. Thus, it was felt that one might be better able to compare male and female, or young, middle-aged, and senior scores, if each item in the Body Cathexis Scale was weighted according to how important an individual perceived that item to be.

The weighting formula used by Watkins and Park (1972) was used in this study:

$$\text{Weighted Body Cathexis} = \frac{\sum (Sj * Ij)}{\sum (Ij)}$$

where Sj and Ij are a subject's satisfaction rating and importance rating, respectively, of aspect j of the Body Cathexis Scale.

This same weighting procedure was used to arrive at the weighted subscale scores for Satisfaction With Parts and Satisfaction With Functions.

RESULTS

Relationship Between Self Concept and Body Cathexis

Table 1 shows the correlations between Total Self Concept scores as measured by the Tennessee Self Concept Scale, and Total Unweighted and Weighted Body Cathexis scores. The Weighted Body Cathexis Scores were obtained by the procedure described above. Among both the male and female young adults, Total Self Concept Scores were significantly correlated with Body Cathexis Scores (male, $r = .52$, $p < .005$; female, $r = .49$, $p < .005$) and with Weighted Body Cathexis Scores (male, $r = .51$, $p < .005$; female, $r = .51$, $p < .005$).

Among the middle-aged male adults, there were positive, nonsignificant correlations between Total Self Concept, and Body Cathexis and Weighted Body Cathexis Scores, while among the middle-aged females, Total Self Concept was significantly related to Body Cathexis ($r = .47$, $p < .01$) and Weighted Body Cathexis ($r = .49$, $p < .01$). In the two groups of senior citizens, males' Total Self Concept Scores were significantly correlated with Body Cathexis Scores ($r = .55$, $p < .005$) and with Weighted Body Cathexis Scores ($r = .54$, $p < .005$) while females' Total Self Concept Scores were nonsignificantly, although slightly negatively, correlated with both of these scores.

Insert Table 1 about here

Body Cathexis: Sex and Age Differences

A series of 2(Sex) by 3(Age) analyses of variance revealed no

Table 1

Correlation Coefficients Between Total Self Concept Scores and Body Cathexis Scores

Age	Totcat	Satpart	Satfunc	Wtdcat	Wtdsatp	Wtdsatf
Young						
Male	.515**	.450**	.579***	.507**	.446**	.548**
Female	.494**	.517**	.355*	.513**	.540**	.367*
Middle-Aged						
Male	.249	.251	.227	.239	.224	.237
Female	.466**	.415*	.447*	.487**	.437*	.474**
Senior						
Male	.549**	.497**	.575**	.544**	.480**	.587**
Female	-.056	-.011	-.113	-.123	-.081	-.153

* $p < .03$

** $p < .01$

*** $p < .001$

Note: The six body satisfaction scores used in the above correlations include;
Totcat - Total Body Cathexis Score
Satpart - Satisfaction With Parts of the Body
Satfunc - Satisfaction With Processes and Functions of the Body
Wtdcat - Weighted Body Cathexis Score
Wtdsatp - Weighted Satisfaction With Parts of the Body
Wtdsatf - Weighted Satisfaction with Processes and Functions of the Body

Table 2

Items With Which Subjects Expressed the Most Satisfaction Most Frequently

Age		Male			Female	
Young	1	Sex Drive	f	1	Sex Organs	p
	2	Sex Activities	f	2	Health	f
	3	Resistance to Illness	f	3	Sex Activities	f
	4	Health	f	4	Sleep	f
	5	Sex Organs	p	5	Resistance to Illness	f
Middle-Aged	1	Health	f	1	Health	f
	2	Resistance to Illness	f	2	Muscular Strength	f
	3	Tolerance for Pain	f	3	Resistance to Illness	f
	4	Appetite	f	4	Sleep	f
	5	Energy Level	f	5	Appearance of Eyes	p
					Facial Complexion	p
					Hair	p
Senior	1	Health	f	1	Health	f
	2	Weight	p	2	Weight	p
	3	Hands	p	3	Appetite	f
	4	Keenness of Senses	f	4	Appearance of Eyes	p
	5	Appearance of eyes	p	5	Resistance to Illness	f
		Digestion	f			
		Resistance to Illness	f			
		Sleep	f			

f represents a body function or process

p represents a body part

significant differences between sexes or age groups on any of the Body Cathexis Scores, including Total Body Cathexis Score, Weighted Total Body Cathexis Score, Satisfaction With Parts, Weighted Satisfaction With Parts, Satisfaction With Functions and Weighted Satisfaction With Functions. Neither were the variances for males as compared to females significantly different for any of the variables reported above.

Although there were no significant group differences on any of the Body Cathexis Scale Scores, examination of the five specific scale items that members of each of the six groups expressed the most positive feelings about most frequently, revealed some interesting similarities and differences among these groups (see Table 2). Appendix J provides the actual response percentages per item for each group.

This analysis of the five 'most satisfactory' items in each of the groups was carried out as a post hoc procedure. Given that a similar analysis of the five 'most important' items for each group was to be done, it was felt that a comparison of these two sets of items within each group might yield some interesting information. Furthermore, in light of the fact that neither sex nor age differences with respect to body cathexis were found, it was felt that a post hoc analysis of the 'most satisfactory' items might provide some preliminary explanation as to why this should be the case.

Insert Table 2 about here

Within each group, participants consistently expressed strong positive feelings with respect to their 'health' and 'resistance to illness'. While both male and female young adults rated 'sex organs'

Table 2

Items With Which Subjects Expressed the Most Satisfaction Most Frequently

Age		Male			Female	
Young	1	Sex Drive	f	1	Sex Organs	p
	2	Sex Activities	f	2	Health	f
	3	Resistance to Illness	f	3	Sex Activities	f
	4	Health	f	4	Sleep	f
	5	Sex Organs	p	5	Resistance to Illness	f
Middle-Aged	1	Health	f	1	Health	f
	2	Resistance to Illness	f	2	Muscular Strength	f
	3	Tolerance for Pain	f	3	Resistance to Illness	f
	4	Appetite	f	4	Sleep	f
	5	Energy Level	f	5	Appearance of Eyes	p
					Facial Complexion	p
					Hair	p
Senior	1	Health	f	1	Health	f
	2	Weight	p	2	Weight	p
	3	Hands	p	3	Appetite	f
	4	Keenness of Senses	f	4	Appearance of Eyes	p
	5	Appearance of eyes	p	5	Resistance to Illness	f
		Digestion	f			
		Resistance to Illness	f			
		Sleep	f			

f represents a body function or process

p represents a body part

and 'sex activities' among the top five body parts or functions with which they were most satisfied, these items did not appear among the top five items of any other group.

Only among the male and female senior citizens was the item 'weight' among the top five items. Also, male and female senior citizens expressed strong positive feelings with respect to the 'appearance of (their) eyes'.

While middle-aged females frequently rated 'facial complexion', 'hair', and 'appearance of eyes' as items with which they were very satisfied, middle-aged males frequently rated 'tolerance for pain', 'appetite' and 'energy level' as such.

Comparing those top five items toward which each group expressed the strongest positive feelings most frequently, with those five items most frequently rated very important by each group provides other interesting information and will be discussed later.

Importance of Body Aspects

An examination of those body parts or functions rated 'most important' most frequently reveals many similarities among the six groups, and also several noteworthy differences (see Table 3). Among the five most frequently highly rated body parts or functions for each group were those items designated as 'health' and 'resistance to illness'. Although 'health' and 'resistance to illness' may have been interpreted by many subjects as essentially the same item, these do represent two separate items on Jourard and Secord's Body Cathexis Scale. Thus, in determining the five most important body aspects within each group as revealed by subjects' responses on this scale, I treated

these as two separate items, rather than arbitrarily defining them to be the same thing.

While 'sex activities' and 'sex drive' were included in the five most important parts or functions for young adult males, these two specific items did not appear among the top five items for any other group. Whereas young and middle-aged males rated both 'energy level' and 'physical stamina' as two of the five most important body parts or functions, the items 'digestion' and 'back' were shared by middle-aged and senior males as two of the most important items. Only among the male senior citizens was 'elimination' rated among the top five items of importance.

Within each of the three female groups (young, middle-aged, senior), 'hair' was considered to be one of the five most important body parts or functions. 'Energy level' and 'sleep' showed up on the list for female young adults, while 'appearance of teeth' was frequently rated very important by both middle-aged and senior females. Table 3 lists the five most important body parts or functions for the six groups. Appendix K provides the response percentages per item for each group.

Insert Table 3 about here

A 2(Sex) by 3(Age) analysis of variance of the Total Importance Scores, for all groups combined, indicated a significant main effect for sex, F (1, 158) = 6.18, $p < .05$. An examination of the means indicated that females (M = 154.69) rated the importance of the parts and processes of the body significantly higher than did males (M = 146.93).

Table 3

Items Which Subjects Considered Most Important Most Frequently

Age		Male			Female	
Young	1	Health	f	1	Health	f
	2	Sex Activities	f	2	Resistance to Illness	f
	3	Resistance to Illness	f	3	Energy Level	f
	4	Energy Level	f	4	Sleep	f
	5	Physical Stamina	f	5	Hair	p
		Sex Drive	f			
Middle-Aged	1	Health	f	1	Health	f
	2	Resistance to Illness	f	2	Resistance to Illness	f
	3	Energy Level	f	3	Hair	p
	4	Physical Stamina	f	4	Appearance of Teeth	p
	5	Back	p	5	Facial Complexion	p
		Digestion	f			
Senior	1	Elimination	f	1	Health	f
	2	Digestion	f	2	Resistance to Illness	f
	3	Health	f	3	Appearance of Teeth	p
	4	Back	p	4	Hair	p
	5	Resistance to Illness	f	5	Physical Stamina	f

f represents a body function or process

p represents a body part

Furthermore, when the 2(Sex) by 3(Age) ANOVA's were calculated on the Importance of Parts Subscale Scores, and the Importance of Functions Subscale Scores, there were no significant main effects for the latter while there was a significant effect of sex on the Importance of Parts scores, F (1, 158) = 7.81, $p < .01$. Females (M = 90.11) rated the importance of body parts significantly higher than did males (M = 84.29). Thus it would appear that the significant difference between males and females on the Total Importance Scores is largely accounted for by the fact that women rated body parts significantly higher than did the men. Table 4 provides the results of the two analyses of variance described above.

Insert Table 4 about here

To carry this analysis one step further, several oneway analyses of variance were calculated to determine if females of one particular age group rated the importance of body parts significantly higher than males of that same age group. While no significant sex differences were found among the young and senior groups, it was discovered that middle-aged women rated the total importance of body parts and processes (Total Importance Score, M = 154.92) significantly higher than did middle-aged men (M = 142.07), F (1, 50) = 4.67, $p < .05$. Furthermore, analysing the Importance of Parts and Importance of Functions Subscale Scores separately, middle-aged women rated the importance of body parts (M = 90.00) significantly higher than did men (M = 80.81), F (1, 50) = 6.01, $p < .05$, but there were no significant sex differences on the Importance of Functions Scores. Table 5 provides the results of the two analyses

Table 4

Analyses of Variance
Total Importance Scores and Importance of Parts Subscale Scores
Among All Subjects

Source	df	SS	MS	F-ratio	p
Total Importance Scores					
Sex	1	2571.85	2571.85	6.18	.014
Age	2	2219.14	1109.57	2.67	.073
Sex x Age Interaction	2	487.79	243.90	.59	.558
Residual	158	65721.75	415.96		
Total	163	70899.63			
Importance of Parts Scores					
Sex	1	1430.56	1430.56	7.81	.006
Age	2	1053.90	526.95	2.88	.059
Sex x Age Interaction	2	205.13	102.56	.56	.573
Residual	158	28953.12	183.25		
Total	163	31599.92			

of variance described above.

Insert Table 5 about here

Any interpretation of the results of the analyses of variance of the Importance Scores reported above must be made with caution. The 40 items that form the Total Importance Score do not form a scale, per se, in the statistical sense of the word. That is, neither validity nor reliability data are available to attest to the general validity and reliability of this 'scale'. The Importance ratings were obtained primarily for the purpose of weighting the rated satisfaction with individual items on the Body Cathexis Scale, and also, for determining which specific body parts and functions would be rated 'very important', most frequently, within each of the six groups of the study. However, the analyses of variance results reported above, indicating that women (particularly middle-aged women) rate the importance of body parts significantly higher than do men (particularly middle-aged men), are considered worthy of note in passing.

Differential Relationships Between Self Concept and Cathexis for Individual Body Aspects

A stepwise multiple regression procedure, essentially identical to that used by Mahoney and Finch (1976a), was performed separately for males and females in this study to investigate the differential relationship between Total Self Concept Scores and individual items of the Body Cathexis Scale. Given the fact that the nature of the relationship between self concept and body cathexis has, to this point,

Table 5

Oneway Analyses of Variance
Total Importance Scores and Importance of Parts Subscale Scores Among Middle-Aged Subjects

Source	df	SS	MS	F-ratio	p
Total Importance Scores					
Between (sex)	1	2142.02	2142.02	4.67	.036
Within	50	22945.64	458.91		
Total	51	25087.66			
Importance of Parts Scores					
Between (sex)	1	1095.18	1095.18	6.01	.018
Within	50	9106.05	182.12		
Total	51	10201.23			

been demonstrated to be strictly correlational, it is not appropriate to speak in terms of specific body aspects contributing differentially to overall self esteem. Therefore, it should be noted that, below, the phrase 'contribute to explaining variance in' is intended to convey the same meaning as 'share some proportion of variance with'.

Mahoney and Finch (1976a) have argued that if satisfaction with body aspects is intercorrelated between various body aspects, then the use of zero order correlation coefficients alone is inadequate to evaluate the differential relationships between Total Self Concept and individual items on a Body Cathexis Scale. These zero order correlation coefficients have been produced in Table 6 to enable the reader to compare results obtained in such a manner with results obtained from the stepwise multiple regression procedure. Appendix L provides the zero order correlation coefficients between Self Concept Scores and cathexis for individual body aspects for males and females (separately). In Appendix L, for each sex, the 40 body aspects are presented in rank order from those with the highest correlations with Self Concept, to those with the lowest.

Insert Table 6 about here

In the stepwise multiple regression procedure, the beta weight values represent the relative proportion of variance in the dependent variable (Self Concept Score) accounted for by satisfaction with each of the independent variables (cathexis for each body aspect). Examination of the initial beta weight values in this study revealed that, among males, 19 of the 40 body aspects and, among females, 20 of the 40 body

Table 6

Zero Order Correlation Coefficients Between Tennessee Self Concept Scale Scores and Cathexis For Individual Body Aspects

Item		Rank Order for Males	r	Rank Order for Females	r
1	Hair	39	-.048	16	.162
2	Facial Complexion	36	.113	37	.019
3	Appetite	33	.157	34	.047
4	Hands	32	.204	35	.037
5	Distribution of Hair (over body)	40	.026	40	-.007
6	Nose	35	.123	22	.141
7	Physical Stamina	25	.253	32	.062
8	Elimination	22	.262	29	-.092
9	Muscular Strength	3	.430	12	.176
10	Waist	34	.148	19	.154
11	Energy Level	7	.363	31	.063
12	Back	16	.296	38	.018
13	Ears	38	.062	39	.009
14	Age	21	.272	14	.167
15	Chin	17	.292	28	.100
16	Body Build	2	.437	2	.317
17	Profile	24	.254	4	.277
18	Height	6	.373	8	.214
19	Keenness of Senses	4	.401	33	.057
20	Tolerance for Pain	11	.322	9	.189
21	Width of Shoulders	20	.282	5	.272
22	Arms	9	.350	17	.158
23	Chest (or breasts)	15	.299	18	.158
24	Appearance of Eyes	8	.357	27	.113
25	Digestion	10	.346	13	.174
26	Hips	26	.250	6	.259
27	Resistance to Illness	1	.525	30	.071
28	Legs	28	.237	1	.367
29	Appearance of Teeth	23	.260	26	.114
30	Sex Drive	37	.102	15	.166
31	Feet	18	.289	3	.304
32	Sleep	13	.314	36	.027
33	Voice	30	.229	24	.126
34	Health	5	.396	23	.128
35	Sex Activities	14	.308	7	.234
36	Knees	29	.235	21	.143
37	Posture	27	.246	10	.185
38	Face	19	.289	11	.178
39	Weight	12	.312	25	.123
40	Sex Organs	31	.219	20	.148

aspects were actually negative suppressor variables.

As explained by Mahoney and Finch (1976a), these negative suppressorvariables

> derive some proportion of their zero order coefficients by sharing more variance with one or more other independent variables which are correlated with self-esteem than that shared with the dependent variable of self-esteem itself. Since negative suppressors generally share a much greater proportion of common variance with other independent variables than that shared with the dependent variable, they can be eliminated from the regression analysis without significantly affecting the value of R^2 (the total variance in the dependent variable accounted for by the independent variables). (p. 255)

In order to isolate a subset of variables that actually contribute to explaining variance in the dependent variable, Mahoney and Finch (1976a) suggest repeating the regression analysis until all negative suppressors are deleted, entering only those variables with positive beta coefficients on each successive run.

This procedure was followed by performing several forward stepwise regression runs on the 40 male and 40 female body aspects against the dependent variable of Total Self Concept. The results of this procedure are presented in Table 7, where R^2 = .38 and .27 for males and females respectively.

Insert Table 7 about here

The data in Table 7 indicate that for males, only 8 of the original 40 body aspects actually account for variance in self concept, while for females, only 9 of the original 40 body aspects remain. For males, two body functions or processes, namely 'resistance to illness' and 'keenness of senses' contribute most to explaining variance in self concept, with 'muscular strength', 'height', 'body build', 'chin', 'sex

Table 7

Final Beta Weights for Male and Female Body Parts and Functions after Deletion of all Negative Suppressor Variables

Body Aspects	r	Beta Coefficient	Beta Weight
	Male		
Resistance to Illness	.525	.308	.161 f
Keenness of Senses	.401	.167	.067 f
Muscular Strength	.430	.091	.039 f
Height	.373	.095	.035 p
Body Build	.437	.079	.035 p
Chin	.292	.084	.025 p
Sex Activities	.308	.033	.010 f
Age	.272	.011	.003 f
	Female		
Legs	.367	.246	.090 p
Width of Shoulders	.272	.192	.052 p
Sex Activities	.234	.122	.029 f
Profile	.277	.010	.027 p
Muscular Strength	.176	.115	.020 f
Feet	.304	.059	.018 p
Digestion	.174	.091	.016 f
Waist	.154	.096	.015 p
Body Build	.317	.023	.007 p

f represents a body process or function

p represents a body part

activities' and 'age' having only minimal beta weights. For females, 'legs' is the aspect which accounts for most of the variance in Self Concept, with 'width of shoulders', 'sex activities', 'profile', 'muscular strength', 'feet', 'digestion', 'waist' and 'body build' contributing minimally.

A word of caution in interpreting these results is offered at this time in that the sample size used for these regression analyses was reasonably small, consisting of 84 females and 80 males.

Type of Activity as Related to Self Concept and Body Cathexis

Given the fact that all of the data for this study was gathered from men and women currently involved in some type of physical activity, an attempt was made to determine what relationships, if any, there may be between type and amount of activity, and Self Concept and Body Cathexis.

The calculation of correlation coefficients within each of the six groups of the study, between number of hours/week spent in some kind of physical activity, and Total Self Concept and Body Cathexis Scores revealed that only among the female middle-aged adults were any of these variables significantly related. More specifically, among this group of women, total number of hours/week spent in some type of physical activity was significantly related to (1) Total Body Cathexis Scores, $r = .42$, $p < .02$, (2) Satisfaction With Functions, $r = .59$, $p < .02$, (3) Weighted Total Body Cathexis Scores, $r = .43$, $p < .02$, and (4) Weighted Satisfaction With Functions, $r = .54$, $p = .02$.

There were some differences across groups with respect to the types of physical activities that subjects chose to participate in. To some

extent these differences may reflect the fact that subjects came from two different facilities, with different activities available, as described earlier in the paper. More specifically, 100% of the young adults, 40% of the middle-aged adults, and 42% of the senior citizens were recruited through the public facility, while the remaining 60% of the middle-aged adults, and 58% of the senior citizens were from the private facility.

At the same time however, these differences in chosen activities may also reflect the differences that naturally occur in the population for different age groups. For example, as mentioned earlier, while few senior citizens jog or play tennis, many are involved in lawn bowling and/or curling. Table 8 provides the frequencies data with respect to the first, second, and third listed preferences of physical activities by members of each of the six groups.

Insert Table 8 about here

A series of oneway analyses of variance was performed in an effort to determine if participation in certain types of physical activities was differentially related to Total Self Concept, Body Cathexis and Body Importance scores, i.e. do joggers tend to have higher Self Concept scores than golfers, etc.? Given that such analyses were conducted with very unequal group sizes, tests of homogeneity of variance were done in every instance in order to determine the accuracy of the reported alpha values. When group sizes and variances are unequal, and <u>fewer</u> persons are sampled from the populations with <u>larger</u> variances, the probability of rejecting a true null hypothesis is <u>greater</u> than alpha. Conversely,

Table 8

Participation in Physical Activities Expressed in Percentages

Group	Physical Activity						
	Jogging	Golfing	Weights	Court Sport	Swimming	Other*	Missing Cases
First Activity Listed							
Young							
Male (n=30)	46.7	3.3	6.7	6.7	23.3	13.3	0.0
Female (n=30)	16.7	0.0	3.3	10.0	43.3	20.0	6.7
Middle-Aged							
Male (n=27)	44.4	25.9	3.7	7.4	7.4	7.4	3.7
Female (n=25)	8.0	36.0	0.0	4.0	24.0	28.0	0.0
Senior							
Male (n=23)	4.3	34.8	0.0	0.0	21.7	39.1	0.0
Female (n=29)	3.4	44.8	0.0	0.0	13.8	31.0	6.9
Second Activity Listed							
Young							
Male (n=30)	6.7	6.7	3.3	13.3	26.7	26.7	16.7
Female (n=30)	10.0	3.3	6.7	0.0	13.3	46.7	20.0
Middle-Aged							
Male (n=27)	0.0	22.2	3.7	3.7	14.8	44.4	11.1
Female (n=25)	4.0	20.0	0.0	4.0	16.0	32.0	24.0
Senior							
Male (n=23)	0.0	13.0	0.0	0.0	4.3	69.6	13.0
Female (n=29)	0.0	3.4	0.0	0.0	13.8	58.6	24.1
Third Activity Listed							
Young							
Male (n=30)	6.7	0.0	3.3	6.7	13.3	30.0	40.0
Female (n=30)	0.0	0.0	6.7	3.3	10.0	23.3	56.7
Middle-Aged							
Male (n=27)	7.4	3.7	0.0	0.0	0.0	48.1	40.7
Female (n=25)	0.0	16.0	0.0	0.0	4.0	28.0	52.0
Senior							
Male (n=23)	0.0	8.7	0.0	0.0	0.0	26.1	65.2
Female (n=29)	0.0	13.8	0.0	0.0	6.9	20.7	58.6

* among young adults, this category largely represents 'walking'
among middle-aged adults, this category largely represents 'curling'
among senior citizens, this category largely represents 'lawn bowling' and 'curling'

when group sizes and variances are unequal, and more persons are sampled from the populations with larger variances, the probability of rejecting a true null hypothesis is less than alpha. Subsequent to finding a significant main effect, pairs of means tests were done using the Scheffe method, the most conservative of all multiple comparison procedures, which allows for unequal group sizes.

For those analyses in which the independent variable was the first physical activity listed by subjects, no significant results were found. When the second physical activity listed was the independent variable, there were several cases in which a significant main effect ($p < .05$) was found for 'type of activity', but in most of those cases, the very conservative Scheffe procedure of multiple comparisons failed to detect significant group differences at the .05 level. Three exceptions are reported below. In each case, it was determined that the alpha level reflected the true probability of rejecting a true null hypothesis. Refer to Table 9 for the results of these three analyses of variance.

Insert Table 9 about here

Among the middle-aged male adults, there were significant type of activity effects on the Satisfaction With Parts Scores, F (4, 19) = 3.52, $p < .05$, and the Weighted Satisfaction With Parts Scores, F (4.19) = 3.61, $p < .05$. Pairs of means comparisons indicated that Satisfaction With Parts Scores among those who listed weightlifting as their second choice of activities (M = 111.00) were significantly higher than Satisfaction With Parts Scores among those who listed swimming as such (M = 72.75). Similarly, Weighted Satisfaction With Parts Scores among

Table 9

Oneway Analyses of Variance
Second Listed Physical Activity Among Middle-Aged and Senior Males

Source	df	SS	MS	F-ratio	p
Middle-Aged Males - Satisfaction with Parts of the Body					
Between (type of activity)	4	1370.42	342.61	3.52	.026
Within	19	1847.42	97.23		
Total	23	3217.84			
Middle-Aged Males - Weighted Satisfaction with Parts of the Body					
Between (type of activity)	4	2.65	.66	3.61	.024
Within	19	3.49	.18		
Total	23	6.14			
Senior Males - Physical Self Subscale of TSCS					
Between (type of activity)	2	396.81	198.40	5.04	.019
Within	17	669.75	39.40		
Total	19	1066.56			

those choosing weightlifting ($\underline{M}$ = 4.66) were significantly greater than Weighted Satisfaction With Parts Scores among those choosing swimming ($\underline{M}$ = 2.97).

Among male senior citizens, there was a significant effect of type of activity on the Physical Self Subscale (of the TSCS) Scores, $\underline{F}$ (2, 17) = 5.04, $\underline{p} < .05$). Those who listed lawn bowling as their second choice of activities ($\underline{M}$ = 73.88) scored significantly higher on this subscale than those who listed golfing as such ($\underline{M}$ = 62.00).

Analyses of variance with the third physical activity listed as the independent variable were not performed in that approximately 50% of the total sample indicated only first and second choices of physical activities.

Weight Perception as Related to Self Concept and Body Cathexis

One final set of analyses was done to determine if one's own subjective impression of one's weight as being underweight, average, or overweight, was related to one's Self Concept and Body Cathexis Scores. In that only seven subjects out of a total of 164 considered themselves underweight, these analyses were restricted to the 157 subjects who viewed themselves as average or overweight. As explained above, in that group sizes were unequal, tests for homogeneity of variance were conducted in each case to determine if the reported alpha level was spuriously inflated or deflated by unequal variances and group sizes.

When all subjects were analysed as a single group, several significant results were obtained (see Table 10). As above, in each case it was determined that the alpha level reflected the true probability of rejecting a true null hypothesis. There was a

significant effect of weight perception on the Physical Self Subscale (of the TSCS) Scores, F (1, 155) = 20.65, $p < .001$, with perceived overweight subjects (M = 67.05) scoring significantly lower than perceived average weight subjects (M = 72.52). Similarly, for both Total Body Cathexis Scores (BC) and Satisfaction With Parts Scores (SP), significant effects of weight perception were found--for BC scores, F (1, 155) = 4.14, $p < .05$; for SP scores, F (1, 155) = 4.48, $p < .05$. On Body Cathexis Scores, those who perceived themselves as average weight (M = 142.42) had significantly higher scores than those who perceived themselves as overweight (M = 135.47). Also on Satisfaction With Parts Scores, perceived average weight subjects (M = 83.07) scored higher than perceived overweight subjects (M = 78.65).

Insert Table 10 about here

When the effects of weight perception were examined within individual groups, the results of three analyses indicated some significant differences (refer to Table 11). Among middle-aged males, there was a significant effect of weight perception on Total Self Concept Scores, F (1, 23) = 9.86, $p < .01$. Those who considered themselves overweight (M = 339.25) scored significantly lower than those who viewed themselves as average (M = 371.35).

Among both middle-aged males and female senior citizens, significant effects of weight perception were found on Total Importance Scores--for middle-aged males, F (1, 23) = 5.16, $p < .05$; for female senior citizens, F (1, 27) = 6.64, $p < .05$. Perceived overweight middle-aged males had significantly lower Importance Scores (M = 125.63)

Table 10

Oneway Analyses of Variance
Weight Perception Among All Subjects

Source	df	SS	MS	F-ratio	p
Physical Self Subscale (of TSCS) Scores					
Between (weight perception)	1	1067.27	1067.27	20.65	.000
Within	155	8010.28	51.68		
Total	156	9077.54			
Total Body Cathexis					
Between (weight perception)	1	1725.16	1725.16	4.14	.044
Within	155	64576.32	416.62		
Total	156	66301.44			
Satisfaction With Parts of the Body					
Between (weight perception)	1	696.32	696.32	4.48	.036
Within	155	24080.74	155.36		
Total	156	24777.06			

than did perceived average weight middle-aged males ($\underline{M}$ = 148.41). Similarly, female senior citizens who considered themselves overweight ($\underline{M}$ = 80.64) scored significantly lower on this scale than did those who perceived themselves as average weight ($\underline{M}$ = 91.89).

Insert Table 11 about here

Table 11

Oneway Analyses of Variance
Weight Perception Among Middle-Aged Males and Female Senior Citizens

Source	df	SS	MS	F-ratio	p
Middle-Aged Males - Tennessee Self Concept Scale					
Between (weight perception)	1	5606.96	5606.96	9.86	.005
Within	23	13073.37	568.41		
Total	24	18680.32			
Middle-Aged Males - Total Importance Score					
Between (weight perception)	1	2824.65	2824.65	5.16	.033
Within	23	12583.98	547.13		
Total	24	15408.63			
Female Senior Citizens - Total Importance Score					
Between (weight perception)	1	1712.72	1712.72	6.64	.016
Within	27	6963.96	257.92		
Total	28	8676.68			

DISCUSSION

Relationship Between Self Concept and Body Cathexis

The previously reported positive, significant relationship between self esteem and satisfaction with the body has clearly been confirmed in four of the six groups in this study, including male and female young adults, middle-aged women, and male senior citizens. Of particular interest are those two groups, composed of middle-aged males and female senior citizens, within which this relationship was not apparent. Is it possible that for these two groups, self esteem and body cathexis are not significantly related because the individuals in each group tend to look more to other sources for the purpose of gaining an increased sense of personal satisfaction?

In an effort to explain why the relationship between self esteem and body satisfaction was not confirmed in these two groups, several subsequent analyses were performed. Comparing all males to all females, it was found that males rated the importance of body parts and functions (Total Importance Score) significantly lower than did females. More specifically, middle-aged men rated the importance of the above significantly lower than did middle-aged women. Thus, it may be that middle-aged males generally consider the body to be less important than do other groups, and consequently may not derive as great a sense of personal satisfaction from various body aspects, resulting in a lower correlation between Self Concept and Body Cathexis.

It is further interesting to note that in a set of analyses across the six groups wherein the effect of the subjective impression of one's weight on Total Importance Scores was evaluated, this effect was

significant only among middle-aged males and female senior citizens. In each of these groups, those who perceived themselves as overweight rated the total importance of body parts and functions significantly lower than did those who perceived themselves as average weight. Also, among middle-aged males, those who considered themselves to be overweight scored significantly lower on the TSCS, than did men of the same age who viewed themselves as average weight.

It is possible that individuals who consider themselves overweight tend to downgrade the importance of the parts and functions of the body as a type of defense mechanism. By refusing to acknowledge, consciously or unconsciously, the importance of the body, they are then spared the anxiety of feeling dissatisfied with or disappointed in the body. At the same time one might then expect these persons to look to other sources from which a sense of personal satisfaction can be gained.

Given that 32% of the middle-aged males and 38% of the female senior citizens considered themselves to be overweight, representing substantial percentages in each group, the above is offered as a tentative explanation for the finding that within each of these groups, self esteem is not significantly, positively related to body cathexis as might be expected.

An alternate explanation may simply be that adults in these two groups gain their greatest sense of personal satisfaction from sources other than their feelings about their bodies, and consequently do not consider their bodies especially important. For example, during the middle years, many men are at the height of their careers, and thus their sense of personal satisfaction may be largely derived from their sense of achievement in those careers. Most likely, their time and

energy are primarily devoted to these endeavours, which may, in turn, be the major focus of their attention and concern.

Female senior citizens, on the other hand, may have reached a stage in their life where physical attractiveness no longer plays such an important role with respect to self concept. Although these women still value various facial aspects highly, as indicated in the importance ratings, perhaps they no longer equate self concept with 'looking good'. No longer as invested in maintaining an attractive appearance for the rest of the world, they may be freer to pursue other interests, i.e. grandchildren, furthering their education, taking up new sports and hobbies, etc., which in turn provide them with an increased sense of personal satisfaction.

As noted earlier, one must exercise some caution in making interpretations about the Total Importance Scores, as the items composing the Importance Score doe not form a true scale in the statistical sense of the word.

Body Cathexis: Sex and Age Differences

The present study was unable to confirm the existence of significant sex or age differences on Jourard and Secord's (1955) Body Cathexis Scale. The application of the weighting procedure described earlier, whereby an individual's rating of each body satisfaction item was weighted by his/her rating of the subjective importance of that item, also failed to reveal any significant sex or age differences. With regard to the lack of significant sex differences, this data is somewhat at odds with what has been previously reported.

Although several authors have found no differences between their

university undergraduate males and females (Secord & Jourard, 1953; Jourard & Secord, 1955; Rosen & Ross, 1968; Lerner, Karabenick & Stuart, 1973; Goldberg & Folkins, 1974), those authors who have studied different sample populations have generally reported sex differences in one direction or the other. For example, among her sample of adolescents, Brunn (1976) found males to be more satisfied with their bodies than females, while Sperling (1975), also studying adolescents, reported just the opposite.

Howe (1973), whose sample was comprised of adults ranging in age from 25 to 70 years (a range of ages nearly identical to that in the present study), found a significant interaction between age and sex. More specifically, she reported that in her youngest group (25-35 years), males scored significantly higher on a scale of body cathexis than did females, and that among her middle-aged group (45-55 years) this same relationship held although scores were generally lower than in the younger group. In her oldest group (60-70 years), there were no differences between the sexes.

The present study does not confirm the existence of an interaction between sex and age. However, it should be pointed out that the sample population in the present study, while almost identical to Howe's (1973) study in terms of age ranges, consisted entirely of persons presently involved in some type of physical activity. This very fact may have resulted in this study's sample being more homogeneous on a variable such as body cathexis than would generally be found in the population at large.

In support of the possibility that potential age or sex differences in level of satisfaction with the body may have been suppressed in this

study due to the homogeneity of the sample with respect to involvement in some kind of physical activity, I would offer the following. Within each of the six groups, the two items (out of a total of 40) 'health' and 'resistance to illness', were ranked among the top five items with which subjects expressed 'very positive feelings' most frequently. Moreover, these same two items were ranked within the top five of those items rated as 'very important' most frequently by all groups. Clearly then, the participants in this study all share a strong common interest in, and concern with, their state of physical health. In turn, this may well exert a global influence on how they feel about their bodies.

Although not discussed earlier in the introduction to this thesis, an interesting result has been found, quite in contradiction to what has been reported in the literature. The one consistent difference between the sexes on measures of body cathexis that had previously been noted was that women were more variable in their responses on such measures than were men (Secord & Jourard, 1953; Jourard & Secord, 1955; Kurtz, 1969; Goldberg & Folkins, 1974).

Kurtz (1969) suggested that such a finding might be attributable to the fact that women, generally being more involved with and attuned to their bodies because of physiological cyclical changes (i.e. menstruation), and societal encouragement to fuss over their bodies (i.e. application of make up and perfumes, maintaining a hair 'style', altering the physical shape with specially made brassieres and girdles, keeping up with the latest clothes fashions, etc.) would have a clearer perception of what they liked and disliked about their physical bodies. Thus, they would be expected to "draw finer evaluative distinctions about the various aspects of their bodies and might be less inclined to

respond to their bodily appearance in a global manner" as might men (Kurtz, 1969, p. 626).

In the present study, there were no significant differences between men and women in terms of their respective within group variances on the Unweighted and Weighted Body Cathexis Scores. This may be explained by the general homogeneity of the groups discussed earlier, in that involvement in some kind of physical activity could, very possibly, result in an individual being more involved with and/or attuned to his body (muscle aches and pains, muscle development, change in shape, etc.), than he would be otherwise.

Another possible explanation is that in 1980, as compared to the 50's and 60's, men are encouraged to a much greater extent to attend to and fuss over their bodies, as has long been the case with women--witness the rapidly expanding lines of men's toiletries and jewellery, the whole concept of men's hair styling, the rapid changes in men's fashions, etc. With respect to men attending to their bodies, there is little doubt that changing societal attitudes can have a profound influence.

Body Cathexis as Related to Weight Perception

Although this study did not confirm previously reported sex differences with respect to within group variance on a measure of body satisfaction, the results do support, with one basic difference, earlier studies which demonstrated that adults with mesomorphic or average builds are more satisfied with their bodies than are adults with endomorphic builds (Sugarman & Haronian, 1964; Kurtz, 1966; Meeker, 1978). In this study, actual body types were not formally measured (as

they were in the studies cited above), but rather, subjects were asked to indicate whether they perceived themselves to be underweight, average weight, or overweight. No attempt was made to validate an individual's perception of his weight as it was expected that this perception, more so than the reality, would have the greatest bearing on how satisfied he or she was with the various parts and functions of his/her body.

As only 7 subjects out of the total 164 considered themselves to be underweight, the analyses were restricted to the other 157 subjects. On both the Physical Self Subscale of the TSCS, and the Body Cathexis Scale, individuals who considered themselves overweight scored significantly lower than those who viewed themselves as average weight. Clearly, it is still preferable to own an 'average weight' body in our society.

The 'Fat is Beautiful' campaign of several years ago apparently did not convince the overweight population, and I suspect that the current movement in the direction of better health and physical fitness leads the overweight person to feel even less satisfied with his body, constantly confronting him with images of what he 'should look like', 'should be doing', and 'should be eating'. This in turn, may have a significant negative effect on his overall level of self esteem given that body satisfaction and self concept appear to be positively correlated among both males and females in various age groups (excluding middle-aged males and female senior citizens as discussed above).

Differential Importance of Body Aspects

An examination across the six groups in the study of those five items rated 'very important' most frequently, as well as the five items

with which subjects expressed 'very positive feelings' most frequently, lends itself to considerable discussion. Nowhere in the existing literature has anyone reported any results of this sort, and thus, there is no information basis against which to compare the findings of this study.

As noted earlier, two particular items, 'health' and 'resistance to illness', consistently appeared in the top five 'importance' and 'satisfaction' lists for each group. Thus, regardless of sex or age (within the ranges of this study), subjects not only valued highly their health status and ability to resist illness, but were also very satisfied with their current level of health and ability to resist illness. As mentioned earlier, this marked simlilarity across the six groups may reflect the sample wide involvement in some type of physical activity.

It may be that, once they acknowledge the importance of good health, adults in this study then endeavoured to establish and maintain a high level of health. Conversely, it is possible that regular involvement in some type of physical activity leads to an experience-based realization of the personal benefits of good health and consequently to an acknowledgement of the importance of same.

Only the male and female young adults frequently expressed strong positive feelings concerning their sexual activities and sexual organs. However, while young males also rated sexual activities and sexual drive among the most important body aspects, none of the sexual items at all appeared in the young females' list of most important items. Clearly, if there is a marked discrepancy between those body parts and functions considered most satisfactory,and those considered most important, there

is bound to be greater discontent with the body. For the most part, however, in each of the six groups there is considerable overlap between the 'most important' and 'most satisfactory' items, attested to by the fact that group differences in the Weighted and Unweighted Body Cathexis Scores were not found.

To a large extent, body functions rather than body parts dominated the lists of 'most important' items in all groups. While young males included no body parts in this list, middle-aged males and male senior citizens both noted the importance of the 'back'. This is not unexpected in that back problems frequently are a matter of concern during these years. 'Energy level' and 'physical stamina' were considered very important by both young and middle-aged males, while middle-aged men also noted the importance of 'digestion'. Among the male senior citizens, 'elimination' and 'digestion' were rated as the two most important items.

Thus, in examining the list of most important items among the males, from young adult through to senior citizen, one sees a definite shift in focus (although 'health' and 'resistance to illness' appear in each list) from 'energy level', 'sexual drive' and 'sexual activities' (young), to 'energy level', 'back' and 'digestion' (middle-aged), to 'elimination', 'digestion' and 'back' (senior citizens). Clearly the process of aging, involving numerous important physiological changes, leads adult males to value the various parts and functions of their bodies quite differently as they pass through different stages of adult life. I would also point out that if a scale of body cathexis had been used that included only body parts, and not processes or functions as well, the above differences across the male age groups might not be so

apparent.

Among adult women, the picture is somewhat different. In all three age groups, 'hair' appeared as one of the five most important items. Thus, among young females, 'hair' was judged to be more important than 'sexual activities' which didn't appear on the list at all. Aside from 'hair', 'sleep' and 'energy level' were also rated as very important. This may be related to the fact that just over half of the young females were mothers with pre-school and/or elementary school age children. Some of these mothers also worked, while some were single parents.

Only among middle-aged women was the list of most important items dominated by body parts rather than functions. Aside from the two previously discussed items that were common to all groups, these women rated 'hair', 'appearance of teeth' and 'facial complexion' among the most important items. Female senior citizens also included 'hair' and 'appearance of teeth'. Items normally associated with the aging process, and which were considered very important by the middle-aged and senior men, such as 'elimination' (senior men only), 'digestion', and 'back', were notably absent among the middle-aged and senior females. Instead, these women were more concerned with items normally associated with physical appearance. Two possible explanations are offered.

Perhaps older women react to the effects of the aging process differently than do men, i.e. women may attempt to downplay or even ignore the actual physiological changes that are taking place in an attempt to pretend that such changes are not occurring. Certainly, if women consider the effects of aging in a more negative light than do men, this explanation is quite feasible. A second possibility is that among women, who have always been more strongly encouraged to attend to

physical appearance than have men (although this seems to be gradually changing), this same orientation toward physical appearance simply continues on into the later stages of adulthood. Thus, the commonly held belief that women tend to be more concerned with how they look to others, than are men, appears to be borne out in this data for middle-aged and senior women.

It is interesting to note that young women in this sample did not, in general, consider body parts related to physical appearance to be the most important body aspects. This may reflect the fact that, in recent years, females have been encouraged to a greater extent to invest their time and energy in matters other than maintaining a pleasing physical appearance. More and more, women are valued, not for what they look like, but rather for what they do, and how well they do it. Thus, it may not be as important for a woman now, at least as compared to 20 or 30 years ago, to endeavour to be physically attractive.

An important point is made at this time with respect to any conclusions drawn based on apparent sex or age differences in this study. Given that education and occupational status vary considerably from group to group, there are bound to be some instances in which it is difficult to ascertain whether a specific difference is attributable to sex, age, education, occupation, or some interaction of any of these. Although education and occupation can be controlled for statistically with respect to the correlations between Total Self Concept and Body Cathexis Scores, and the analyses of variance of Body Cathexis Scores, this is not easily done when comparing the five 'most satisfactory' or five 'most important' body aspects between groups. Thus, the items that appear in these 'lists' for each group may be a function not only of age

and/or sex, but also of occupation and/or education.

Unless education and occupation are controlled for in the initial assigning of subjects to groups, it is very difficult to sort out how these variables may interact with sex and age to affect the relative importance of different body aspects. At the same time, however, to control for education and occupation in this way would make it extremely difficult to fill the cells of a research design. As well, it would likely mean using a sample which is far less representative of the true population than the one used in this study.

In this study, for example, the level of education attained by the young adults is much higher than that attained by the senior citizens. Undoubtedly this reflects the differences in educational opportunities (and necessities) that were available to these different age groups, and thus this educational difference is one that naturally occurs in the population at this time. Consequently, it could be quite difficult to sample equal numbers of subjects from several educational levels in several different age groups.

In years to come however, these basic educational differences between age groups may disappear as today's highly educated adults become tomorrow's senior citizens, and educational opportunities continue to be made available to the upcoming generations.

Differential Relationships Between Self Concept and Cathexis for Individual Body Aspects

The multiple regression analyses that were performed as a peripheral part of this thesis appear to indicate that body build and shape in general tend to be important to self concept both for males and

females. Although the individual body aspect which contributed most to the variance in self esteem for males was 'resistance to illness' (beta weight = .161), the three aspects of muscular strength, height, and body build combined, accounted for 10.9% of the variance in self esteem. Among the females, 4 body aspects related to body build and shape--legs, width of shoulders, waist, and body build--similarly accounted for a considerable proportion of the variance (16.4%) in self esteem.

Contrary to the conclusions of Lerner et al. (1973), the importance of facial aspects to self esteem for males and females was not supported in this data. However, the results of the Lerner et al. study were based solely on the zero order correlation coefficients while Mahoney and Finch (1976a), using multiple regression procedures as in this study, similarly did not confirm the importance of facial features.

While Mahoney and Finch (1976a) found that body aspects which contributed to explaining variance in self esteem were clearly different for males and females, this study has noted several similarities. Apart from two specific body build or shape items ('muscular strength', 'body build') that were shared by both sexes after all negative suppressor variables were deleted from the regression equations, and a couple of general items related to body build that weren't identical for both sexes, the item 'sex activities' contributed to a small proportion of the variance in self esteem for both males and females. It should be pointed out, however, that subjects in this study included adults ranging in age from 25-65+, while the two studies mentioned above restricted their samples to university undergraduates.

As previously discussed, Mahoney and Finch (1976a) suggested that the analysis of zero order correlations between Total Self Concept

Scores and cathexis for individual body aspects was insufficient to determine the differential relationships between these variables. In this study however, a comparison of these zero order correlation coefficients for males and females (Appendix K) with the individual item beta weights from the multiple regression procedures for both sexes reveals many similarities.

For the males, those five body aspects with the highest beta weights from the regression procedure were among the six aspects most highly correlated (zero order correlations) with Self Concept Scores. Similarly for the females, five of the six body aspects with the highest beta weights were among the seven aspects most highly correlated with Total Self Concept Scores. Thus, it would appear that these two procedures for determining differential relationships between self concept and cathexis for individual body aspects yield very similar results, at least in this study. Mahoney and Finch's (1976a) argument that zero order correlation analysis alone is inadequate to determine such differential relationships may be inaccurate.

As has been previously suggested in the 'Results' section, a clearer picture of the differential relationship between self esteem and body satisfaction might be obtained through the use of larger sample sizes.

Type of Activity as Related to Self Concept and Body Cathexis

In that all subjects in this study were involved in some type of physical activity, several analyses were done to determine if there were any significant relationships between type and amount of activity, and body cathexis and importance, within each of the six groups. Only among

middle-aged females was there a significant positive relationship between number of hours/week spent in physical activities and Weighted and Unweighted Total Body Cathexis Scores. This single significant result is difficult to interpret. Perhaps it is not the quantity of time spent in physical activities, but rather the quality of time so spent that is related to Total Body Cathexis.

As noted earlier, there were some differences across groups with respect to the types of physical activities that subjects chose to participate in. As was pointed out, these differences may reflect the fact that subjects were recruited from two different recreational facilities. All of the young adults, and some of the middle-aged and senior citizens came from a public recreational center, while 60% of the middle-aged adults and 58% of the senior citizens came from a private multi-activity club. Differences in activity choices may simply reflect the naturally occurring differences across age groups, i.e. few senior citizens jog or play tennis, while many participate in lawn bowling and/or curling.

Only a few isolated results came out of the analyses of the different types of activities that subjects took part in, and these were based on very unequal group sizes. Among the middle-aged males, those who listed weightlifting as their second choice of activities were more satisfied with the parts of the body than were those who listed swimming as such. Among male senior citizens, those who listed lawn bowling as their second choice of activities scored higher on the Physical Self Subscale of the TSCS than did those who listed golfing as such.

In order to fully examine the relationships between type of activity and Body Cathexis and Importance Scores, I would strongly

suggest that a separate study be conducted with type of activity as a controlled, independent variable. Under such circumstances, I strongly suspect that one would find many interesting differences on some of these variables among persons involved (to a greater or lesser extent) in numerous different types of activities. For example, weightlifters might value various parts and functions of the body in a considerably different manner than might runners or tennis players.

In summary, while some previously reported results concerning body satisfaction have been confirmed in the present study, others have not. Furthermore, some new information has been added to the existing body of literature.

Several limitations of the present study that have been discussed earlier to some extent are reviewed below. Given the fact that all of the subjects in this study were involved in some type of physical activity, definite limitations are placed on the generalizability of the reported results. Certainly this sample is not representative of the population in general. While recognizing these limitations, however, it should be noted that few studies in the area of Body Cathexis have involved subjects other than university undergraduates. This study has.

In order to extend generalizability beyond 'those young (25-35 years), middle-aged (45-55 years), and senior (65 years and over) men and women who are currently involved in some form of physical activity', a study similar to the present one could be undertaken with males and females (young, middle-aged, senior) who have <u>not</u> been selected on the basis of involvement in physical activity. Such a sample would likely include a majority of subjects who are not involved in any activity and a minority who are, thus reflecting the 'true state of affairs' in the

general population.

As has been noted several times throughout this thesis, there is a definite possibility that the homogeneity of the sample with respect to involvement in some type of physical activity may have suppressed potential sex or age differences. A follow up study with males and females of similar ages (i.e. 25-35 years, 45-55 years, 65+ years) who are not currently involved in any type of physical activity could certainly serve to clarify such a posssibility. Furthermore, the results of such a study could provide a basis for making comparisons between people involved and noninvolved in physical activities.

In order to clarify any relationships between type of activity, and self concept and body cathexis it is suggested that a separate study be conducted in which 'type of activity' is a carefully controlled independent variable. Furthermore, it would be preferable to draw all subjects from the same facility so that choices of activities could be made based on the availability of the exact same set of activities to all persons.

Given that several significant and interesting results have been found with respect to the importance of various body parts and functions for different sexes and age groups, it is recommended that the appropriate statistical work be done with this very preliminary 'scale' in order to ascertain its reliability and validity. As it stands now, results obtained from this importance 'scale' must be interpreted with caution and thus definitive conclusions cannot be stated. As a scale with established reliability and validity, it could prove to be a very useful tool in subsequent body image research.

In a similar vein, the preliminary construction of the two

subscales of the Body Cathexis Scale (Satisfaction With Parts, Satisfaction With Functions) carried out earlier in this study lacks the necessary statistical validation, and thus, any conclusions reached with respect to these subscale scores must also be interpreted with caution.

Notwithstanding the shortcomings discussed above, this study has some important findings which seem to add to the body satisfaction literature. As noted above, rather than restricting the sample population to university undergraduates as most studies have done in the past, subjects were drawn from a non-university student population, sampling three stages of adult life. Thus, an important relationship previously established only among university students (i.e. positive correlation between body cathexis and self concept) has been extended to include non-student men and women of different ages.

At the same time, a scale of body satisfaction was used that included items pertaining both to <u>functions and processes</u> of the body, as well as <u>parts</u> of the body, whereas many earlier studies focused only on satisfaction with <u>parts</u> of the body. Furthermore, the scale used in this study included items pertaining to elimination, and sexual organs and activities; important items that frequently have not been included on scales used in previous research.

Finally, having subjects rate the subjective importance of individual body aspects, and then comparing the frequencies of such ratings between groups has added some important new information to the literature with respect to differences in how males and females of different ages value the various parts and functions of their bodies.

SUMMARY

Briefly, the major results of this study are summarized below.

(1) The positive and significant relationship previously demonstrated between self concept and body satisfaction was confirmed among four of the six groups in this study. A tentative explanation as to why this relationship did not hold true for middle-aged males and female senior citizens was discussed.

(2) Although neither sex nor age was found to have a significant effect on several Body Cathexis scores, it was suggested that the homogeneity of the total sample with respect to the sample-wide involvement in some kind of physical activity may actually have suppressed any potential sex or age differences that may exist in the general population.

(3) Contrary to previously reported results that women "draw finer evaluative distinctions about the various aspects of the body" (Kurtz, 1969, p. 626) and thus show more overall variability in their responses on body cathexis scales than do men, this study found no significant differences between men and women in this regard. This may be attributable to changing societal attitudes in that men are now more frequently encouraged to atttend to their bodies and thus may be more able to draw fine evaluative distinctions as well. Alternatively, the homogeneity of the sample may account for this absence of sex differences on within group variability.

(4) Providing further support to previously published results, perceiving oneself as overweight has been found to have a general negative effect on one's level of satisfaction with one's body.

(5) Those five items considered most important most frequently revealed some interesting differences between males and females, especially as related to the aging process. Whereas more body functions became more important to males in the middle-aged and senior groups, women continued to view body aspects related to physical appearance as more important in the middle and later years.

(6) With respect to the multiple regression analyses performed to examine the differential relationships between cathexis for individual body aspects, and total self concept, general body build or shape seems to be the aspect of the body most important to self esteem for both males and females. Facial features do not appear to play an important part.

(7) Finally, little light was thrown on the nature of the relationships between type of activity and level of body satisfaction.

Limitations of the present study were discussed and recommendations for further research were offered.

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APPENDIX A

Number of Subjects From Each Recreational Facility Broken Down by Sex and Age

Table A

Number of Subjects From Each Recreational Facility
Broken Down by Sex and Age

Group	Facility		Total
	Public Recreation Center	Private Club	
Male			
Young	30	0	30
Middle-Aged	13	14	27
Senior	11	12	23
Female			
Young	30	0	30
Middle-Aged	8	17	25
Senior	11	18	29

APPENDIX B

Discussion and Analysis of Educational And Occupational Differences

Discussion and Analysis of Educational and Occupational Differences

As Table A indicates, there are several basic occupational and educational differences between the men and women in this study. While there are no male homemakers whatsoever, many of the women in all three age groups have defined their occupation as such. While young males are employed in several levels of occupation, a large majority of the middle-aged men are businessmen or professionals. Virtually all senior males are retired. A larger proportion of young women work, in some capacity, than do either middle-aged or senior women.

With respect to education, there are relatively few differences between men and women in general, but there is a definite trend for younger persons to have attained a higher level of education than those in the next oldest age group, i.e. young adults have generally had more education than middle-aged adults, who have had more than senior citizens. This undoubtedly reflects the different opportunities for, and necessities of, higher education that have existed for each of the age groups.

These occupational and educational differences were statistically controlled for in the calculation of the correlation coefficients between Total Self Concept and Body Cathexis Scores, and the two factor (sex by age) analyses of variance of the Body Cathexis Scores. In all cases, these analyses (with occupation and education controlled) yielded virtually the same results as did similar analyses whereby education and occupation were not statistically controlled. Thus, neither of these variables was a significant factor in these major statistical analyses.

With regard to the potential effect of occupation and/or education

on the five items listed as 'most satisfactory' and those listed 'most important' within each of the six groups, it was not possible to statistically control for these variables. Thus, one really can't be certain that apparent sex and/or age differences are not interacting with education and/or occupation differences, to result in the final 'satisfactory' and 'importance' lists. This is discussed at length in the 'Discussion' section of the paper.

Table A

Occupational and Educational Status of All Subjects

Age Occupation	Male*	Female*	Education	Male*	Female*
Young					
(male, n=30)					
(female, n=30)					
Homemaker	0.0	33.3	College Graduate	40.0	40.0
Student	3.3	0.0	Some College	20.0	33.3
Retired	0.0	0.0	High School Graduate	26.7	16.7
Labourer	16.7	6.7	Some High School	10.0	10.0
Other	30.0	13.3	Grade School	3.3	0.0
Businessperson	30.0	23.3			
Professional	20.0	23.3			
Middle-Aged					
(male, n=27)					
(female, n=25)					
Homemaker	0.0	64.0	College Graduate	37.0	20.0
Student	0.0	0.0	Some College	22.2	28.0
Retired	3.7	0.0	High School Graduate	29.6	40.0
Labourer	7.4	4.0	Some High School	7.4	8.0
Other	7.4	0.0	Grade School	0.0	4.0
Businessperson	48.1	24.0			
Professional	33.3	8.0			
Senior					
(male, n=23)					
(female, n=29)					
Homemaker	0.0	48.3	College Graduate	8.7	17.2
Student	0.0	0.0	Some College	17.4	13.8
Retired	95.7	51.7	High School Graduate	39.1	48.3
Labourer	0.0	0.0	Some High School	17.4	17.2
Other	4.3	0.0	Grade School	17.4	3.4
Businessperson	0.0	0.0			
Professional	0.0	0.0			

* figures in these columns represent percentages of the individual groups

APPENDIX C

Instructions and Concluding Remarks to Subjects in Questionnaire Sets

Introduction

Before you begin this set of four questionnaires, I would like to take this opportunity to thank you for volunteering to be a participant in this study. Frequently, one of the most difficult aspects of conducting a research study is to find enough participants who are willing to give a little of their time to provide the information that researchers are seeking. Thus, I thank you for agreeing to participate and assure you that your expenditure of time and effort is greatly appreciated.

At this point, there are a couple of explanations that I would like to offer, and several suggestions that I would like to make. First of all, this is NOT an evaluative or judgmental set of questionnaires. There are no right or wrong, better or worse answers. Thus, I would ask that you not try to provide what you think may be the 'right' or 'better' responses. Rather, I would encourage you to be completely honest in responding to the various questionnaires according to the given instructions. Such honesty is crucial to the ultimate validity and significance of the results.

I would suggest that you fill out these four questionnaires seated in a reasonably quiet room (preferably alone), and I would ask that you NOT consult with a friend or spouse about any of the questions or any of your responses. Also, I would prefer that you complete all four questionnaires at one sitting if this is possible.

As you complete each questionnaire, I would ask that you place it into the brown envelope provided and leave it there. Thus, I am asking that you NOT go back to a previously completed questionnaire either to review your earlier responses, to change an earlier response, or for any other reason. Shifting back and forth between questionnaires will considerably lengthen the time it takes you to complete these questionnaires.

At the top of each questionnaire you will see a "Suggested Time for Completion". These "Suggested Times" represent how long most people take to complete the individual questionnaires. These are NOT time limits. While I would hope that you are giving careful thought to each of your responses, if you are taking considerably longer than the "Suggested Times", you may be dwelling on individual items longer than necessary. If that is the case I would encourage you to move through the items a little faster.

Just before you begin, I would like you to look in the bottom right hand corner on the front of the brown envelope from which you took this set of questionnaires. In that corner you will find a number--this is your "participant number". As you proceed through the four questionnaires, one by one, please write this participant number in the space provided in the top right hand corner of each sheet. This participant number is important in that it identifies each of the four questionnaires in one set as having been completed by the same individual. That is important for me to know when it comes time to

analyse the results. It is NOT necessary that I know the identity of any individual.

You are now ready to begin. PLEASE READ ALL OF THE INSTRUCTIONS CAREFULLY, AND REMEMBER TO PUT EACH QUESTIONNAIRE INTO THE BROWN ENVELOPE AS SOON AS YOU HAVE COMPLETED IT. After you have placed the fourth questionnaire and the 'Concluding Remarks' into the brown envelope, seal the envelope and drop it in a mail box. I would ask that you complete and return this set of questionnaires to me within two weeks from the day you receive it, as I will be ready to begin the analyses of the responses at that time.

Concluding Remarks

Now that you have completed this set of four questionnaires, I would again like to thank you for the time and effort that you have spent in doing so. After you have finished reading this last section, I would ask that you place this final sheet into the brown envelope and seal the envelope. Then, I would ask that you drop the stamped and addressed envelope into a mail box as soon as possible.

I will be happy to share the results of this study with any interested participants around the end of the summer. If you would like me to contact you to discuss the results, please write your name, address and phone number in the space provided below, and send it, in a separate envelope to

Karen Davies
Department of Psychology
Duff Roblin Building
University of Manitoba
Winnipeg, Manitoba
R3T 2N2 ph #474-9338

If you have any questions or would like any further information, I can be reached through the above address (or phone number). Furthermore, if you wish to make any comments about any aspect of your participation in this study, please feel free to do so on the back of this page.

Yes, I would like you to contact me around the end of the summer to discuss the results of this research project.

Name_____

Address_____

Phone Number_____

APPENDIX D

Questionnaire #1: Demographic Data and How Leisure Time is Spent

QUESTIONNAIRE #1

Suggested Time for Completion: 15 minutes

Below you will find several general questions about yourself and several questions concerning the way in which you use your recreational or leisure time. Please respond by either checking the appropriate alternative, or providing a short answer in the space provided. Please make sure that you respond to all questions.

1. Are you
   (a) male
   (b) female ?

2. At the time that you are filling out this questionnaires, how old are you? _____

3. What is your present height_____ and weight_____?

4. Do you consider yourself

   (a) underweight
   (b) average
   (c) overweight ?

5. What is your present occupation?_____

6. What is the last year of school that you have completed?

   (a) college graduate or higher
   (b) some college
   (c) high school graduate
   (d) some high school
   (e) grade school or less

7. Are you
   (a) married (or living with a member of the opposite sex)
   (b) single (or otherwise living on your own)
   (c) sharing a residence with a member of the same sex ?

8. Do you have any children living with you at present?

   (a) yes
   (b) no

9. If you answered 'yes' to Question #8 above, how many children do you have living with you at present, and how old are they?

_____

10. Have you ever had any form of cosmetic surgery?

   (a) yes
   (b) no

11. If you answered 'yes' to Question #10 above, briefly describe the nature of this cosmetic surgery?_____

_____

12. Do you wear any special clothing or prosthetic device to alter your physical appearance in any way?

(a) yes
(b) no

13. If you answered 'yes' to Question #12 above, briefly describe the special clothing or prosthetic device that you wear._____

_____

14. What are your favorite recreational or leisure time activities? (List up to 5 in order of preference).

1._____

2._____

3._____

4._____

5._____

15. On an average, approximately how many hours per week do you spend on each of the above listed activities?

1._____ 4._____

2._____ 5._____

3._____

16. Do you enjoy reading?

(a) yes
(b) no

17. If you answered 'yes' to Question #16 above, which type of reading material do you prefer?

(a) fiction
(b) non-fiction
(c) no preference

18. Do you like to watch television?

(a) yes
(b) no

19. If you answered 'yes' to Question #18 above, which programs do you prefer to watch? (List up to 5 in order of preference).

1._____

2._____

3._____

4._____

5._____

20. During your recreational or leisure time, do you <u>generally</u> prefer

(a) to involve yourself in some activity alone
(b) to involve yourself in some activity with one other person
(c) to involve yourself in some activity with a group of people ?

21. Are you currently involved in any <u>structured</u> physical fitness or exercise activities? i.e. fitness class, tennis lessons, swimming lessons, etc.

(a) yes
(b) no

22. If you answered 'yes' to Question #21 above, approximately how many hours per week are you involved in such activities?_____

23. What, specifically, are these activities?

_____

_____

_____

24. Are you currently involved in any <u>unstructured</u> physical fitness or exercise activities? i.e. your own jogging or exercise program, recreational tennis, recreational swimming, etc.

(a) yes
(b) no

25. If you answered 'yes' to Question #24 above, approximately how many hours per week are you involved in such activities?_____

26. What, specifically, are these activities?

_____

_____

_____

27. If you are involved in some type of physical fitness or exercise activities (structured or unstructured), for what length of time (approximately) have you been involved?_____

28. Do you play any musical instrument(s)?

(a) yes
(b) no

29. If you answered 'yes' to Question #28 above, which instrument(s) do you play?

1._____

2._____

3._____

30. If you answered 'yes' to Question #28, approximately how many hours per week do you play each instrument listed in Question #29?

1._____

2._____

3._____

31. Do you enjoy working around the house, in the yard or in a garden (flower or vegetable)?

(a) yes
(b) no

32. If you answered 'yes' to Question #31 above, approximately how many hours per week do you spend working

(a) around the house_____?

(b) in the yard_____?

(c) in a garden (flower or vegetable)_____?

33. On the whole, do you feel that you have enough leisure time during the week to engage in your favorite leisure and recreational activities?

(a) yes
(b) no

34. If you answered 'no' to Question #33 above, how many more hours per week would you like to have for leisure or recreational activities if you could fit them into your schedule?_____

35. At present, how would you describe your general physical health?

(a) excellent
(b) very good
(c) good
(d) poor
(e) very poor

36. How often have you been admittted to hospital during the last

(a) 1 year _____ ?

(b) 3 years _____ ?

(c) 5 years _____ ?

(d) 10 years _____ ?

37. Are you currently taking any medication on a regular basis?

(a) yes
(b) no

38. If you answered 'yes' to Question #37 above, briefly describe the nature of this medication, and name the condition(s) it is being used to treat._____

_____

_____

39. Do you have any physical disability or chronic condition?

(a) yes
(b) no

40. If you answered 'yes' to Question #39 above, please name and describe this condition and the amount of discomfort and impairment it imposes on you._____

_____

_____

_____

41. What do you notice first about another person's physical appearance?

_____

42. If you could change any aspect of your own physical appearance, what would you change? _____

_____

Now that you have completed this questionnaire, please place it in the brown envelope and do not take it out again.

PROCEED TO QUESTIONNAIRE #2

APPENDIX E

Tennessee Self Concept Scale

QUESTIONNAIRE #2

Suggested Time for Completion: 20 minutes

Below you will find a list of statements that are designed to help you describe yourself as you see yourself. Please respond to them as if you were describing yourself to yourself. Do not omit any item. Read each statement carefully; then select one of the five responses listed below. Beside each statement, in the space provided, write the number that corresponds to the response that you have selected.

Responses:	Completely false	Mostly false	Partly false & partly true	Mostly true	Completely true
	1	2	3	4	5

You will find these response numbers repeated at the bottom of each page to help you remember them.

		Response
1.	I have a healthy body	_____
2.	I am an attractive person	_____
3.	I consider myself a sloppy person	_____
4.	I am a decent sort of person	_____
5.	I am an honest person	_____
6.	I am a bad person	_____
7.	I am a cheerful person	_____
8.	I am a calm and easy going person	_____
9.	I am a nobody	_____
10.	I have a family that would always help me in any kind of trouble	_____
11.	I am a member of a happy family	_____
12.	My friends have no confidence in me	_____
13.	I am a friendly person	_____
14.	I am popular with men	_____
15.	I am not interested in what other people do	_____

Response

16. I do not always tell the truth....._____

17. I get angry sometimes....._____

18. I like to look nice and neat all the time....._____

19. I am full of aches and pains....._____

20. I am a sick person....._____

21. I am a religious person....._____

22. I am a moral failure....._____

23. I am a morally weak person....._____

24. I have a lot of self-control....._____

25. I am a hateful person....._____

26. I am losing my mind....._____

27. I am an important person to my friends and family....._____

28. I am not loved by my family....._____

29. I feel that my family doesn't trust me....._____

30. I am popular with women....._____

31. I am mad at the whole world....._____

32. I am hard to be friendly with....._____

33. Once in a while I think of things too bad to talk about..._____

34. Sometimes, when I am not feeling well, I am cross....._____

35. I am neither too fat nor too thin....._____

36. I like my looks just the way they are....._____

37. I would like to change some parts of my body....._____

38. I am satisfied with my moral behavior....._____

Responses:	Completely false	Mostly false	Partly false & partly true	Mostly true	Completely true
	1	2	3	4	5

Response

39. I am satisfied with my relationship to God....._____

40. I ought to go to church more often....._____

41. I am satisfied to be just what I am....._____

42. I am just as nice as I should be....._____

43. I despise myself....._____

44. I am satisfied with my family relationships....._____

45. I understand my family as well as I should....._____

46. I should trust my family more....._____

47. I am as sociable as I want to be....._____

48. I try to please others, but I don't overdo it....._____

49. I am no good at all from a social standpoint....._____

50. I do not like everyone I know....._____

51. Once in a while, I laugh at a dirty joke....._____

52. I am neither too tall nor too short....._____

53. I don't feel as well as I should....._____

54. I should have more sex appeal....._____

55. I am as religious as I want to be....._____

56. I wish I could be more trustworthy....._____

57. I shouldn't tell so many lies....._____

58. I am as smart as I want to be....._____

59. I am not the person I would like to be....._____

60. I wish I didn't give up as easily as I do....._____

61. I treat my parents as well as I should. (Use past tense if parents are not living)....._____

Responses:	Completely false	Mostly false	Partly false & partly true	Mostly true	Completely true
	1	2	3	4	5

Response

62. I am too sensitive to things my family say....._____

63. I should love my family more....._____

64. I am satisfied with the way I treat other people....._____

65. I should be more polite to others....._____

66. I ought to get along better with other people....._____

67. I gossip a little at times....._____

68. At times I feel like swearing....._____

69. I take good care of myself physically....._____

70. I try to be careful about my appearance....._____

71. I often act like I am "all thumbs"....._____

72. I am true to my religion in my everyday life....._____

73. I try to change when I know I'm doing things that are wrong....._____

74. I sometimes do very bad things....._____

75. I can always take care of myself in any situation....._____

76. I take the blame for things without getting mad....._____

77. I do things without thinking about them first....._____

78. I try to play fair with my friends and family....._____

79. I take a real interest in my family....._____

80. I give in to my parents. (Use past tense if parents are not living)....._____

81. I try to understand the other fellow's point of view....._____

82. I get along well with other people....._____

83. I do not forgive others easily....._____

Responses:	Completely false	Mostly false	Partly false & partly true	Mostly true	Completely true
	1	2	3	4	5

Response

84. I would rather win than lose a game....._____

85. I feel good most of the time....._____

86. I do poorly in sports and games....._____

87. I am a poor sleeper....._____

88. I do what is right most of the time....._____

89. I sometimes use unfair means to get ahead....._____

90. I have trouble doing the things that are right....._____

91. I solve my problems quite easily....._____

92. I change my mind a lot....._____

93. I try to run away from my problems....._____

94. I do my share of work at home....._____

95. I quarrel with my family....._____

96. I do not act like my family thinks I should....._____

97. I see good points in all the people I meet....._____

98. I do not feel at ease with other people....._____

99. I find it hard to talk with strangers....._____

100. Once in a while I put off until tomorrow what I ought to do today....._____

Responses:	Completely false	Mostly false	Partly false & partly true	Mostly true	Completely true
	1	2	3	4	5

Now that you have completed this questionnaire, please place it in the brown envelope and do not take it out again.

PROCEED TO QUESTIONNAIRE #3

APPENDIX F

Body Cathexis Scale

QUESTIONNAIRE #3

Suggested Time for Completion: 8 minutes

Below you will find a list of 40 parts or aspects of the body, each one followed by a rating scale. On this rating scale, you are asked to indicate how you feel about each part or aspect of your body, according to the following 5 point scale:

1. Have strong negative feelings.
2. Have moderate negative feelings.
3. Have no feeling one way or the other.
4. Have moderate positive feelings.
5. Have strong positive feelings.

You are asked to rate how you feel about each body part or aspect by circling the appropriate number on the scale. For example, if 'ankles' is the item in question, and you have moderate negative feelings about your ankles, you would respond in the following way:

Ankles

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

Please make sure that you rate each of the 40 body parts or aspects.

1. Hair

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

2. Facial Complexion

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

3. Appetite

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

4. Hands

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

5. Distribution of Hair (over body)

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

6. Nose

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

7. Physical Stamina

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

8. Elimination

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

9. Muscular Strength

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

10. Waist

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

11. Energy Level

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

12. Back

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

13. Ears

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

14. Age

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

15. Chin

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

16. Body Build

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

17. Profile

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

18. Height

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

19. Keenness of Senses

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

20. Tolerance for Pain

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

21. Width of Shoulders

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

22. Arms

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

23. Chest (or breasts)

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

24. Appearance of Eyes

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

25. Digestion

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

26. Hips

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

27. Resistance to Illness

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

28. Legs

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

29. Appearance of Teeth

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

30. Sex Drive

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

31. Feet

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

32. Sleep

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

33. Voice

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

34. Health

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

35. Sex Activities

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

36. Knees

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

37. Posture

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

38. Face

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

39. Weight

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

40. Sex Organs

1	2	3	4	5
strong negative feelings		neutral		strong positive feelings

Now that you have completed this questionnaire, place it in the brown envelope and do not take it out again.

PROCEED TO QUESTIONNAIRE #4

APPENDIX G

Satisfaction With Parts and Satisfaction With Functions Subscales

Table A

Satisfaction with Parts and Satisfaction with Functions Subscales

*Item #	Parts (n=24)	*Item #	Functions (n=16)
1	Hair	3	Appetite
2	Facial Complexion	7	Physical Stamina
4	Hands	8	Elimination
5	Distribution of Hair (over body)	9	Muscular Strength
6	Nose	11	Energy Level
10	Waist	14	Age
12	Back	19	Keenness of Senses
13	Ears	20	Tolerance for Pain
15	Chin	25	Digestion
16	Body Build	27	Resistance to Illness
17	Profile	30	Sex Drive
18	Height	32	Sleep
21	Width of Shoulders	33	Voice
22	Arms	34	Health
23	Chest (or breasts)	35	Sex Activities
24	Appearance of Eyes	37	Posture
26	Hips		
28	Legs		
29	Appearance of Teeth		
31	Feet		
36	Knees		
38	Face		
39	Weight		
40	Sex Organs		

* represents where the item is placed within the total Body Cathexis Scale.

APPENDIX H

Scale for Rating the Importance of Various Body Parts and Functions

QUESTIONNAIRE #4

Suggested Time for Completion: 8 minutes

Below you will find a list of 40 parts or aspects of the body, each one followed by a rating scale. On this rating scale, you are asked to indicate how important that body part or aspect is to you, according to the following 5 point scale:

1. Not important at all.
2. Moderately unimportant.
3. Neither important nor unimportant.
4. Moderately important.
5. Very important.

You are asked to rate how important each body part or aspect is by circling the appropriate number on the scale. For example, if 'ankles' is the item in question, and your ankles are very important to you, you would respond in the following way:

Ankles

1 2 3 4 5
not important neutral very important

Please make sure that you rate each of the 40 body parts or aspects.

1. Hair

1 2 3 4 5
not important neutral very important

2. Facial Complexion

1 2 3 4 5
not important neutral very important

3. Appetite

1 2 3 4 5
not important neutral very important

4. Hands

1 2 3 4 5
not important neutral very important

5. Distribution of Hair (over body)

1 2 3 4 5
not important neutral very important

6. Nose

1	2	3	4	5
not important		neutral		very important

7. Physical Stamina

1	2	3	4	5
not important		neutral		very important

8. Elimination

1	2	3	4	5
not important		neutral		very important

9. Muscular Strength

1	2	3	4	5
not important		neutral		very important

10. Waist

1	2	3	4	5
not important		neutral		very important

11. Energy Level

1	2	3	4	5
not important		neutral		very important

12. Back

1	2	3	4	5
not important		neutral		very important

13. Ears

1	2	3	4	5
not important		neutral		very important

14. Age

1	2	3	4	5
not important		neutral		very important

15. Chin

1	2	3	4	5
not important		neutral		very important

16. Body Build

1	2	3	4	5
not important		neutral		very important

17. Profile

1	2	3	4	5
not important		neutral		very important

18. Height

1	2	3	4	5
not important		neutral		very important

19. Keenness of Senses

1	2	3	4	5
not important		neutral		very important

20. Tolerance for Pain

1	2	3	4	5
not important		neutral		very important

21. Width of Shoulders

1	2	3	4	5
not important		neutral		very important

22. Arms

1	2	3	4	5
not important		neutral		very important

23. Chest (or breasts)

1	2	3	4	5
not important		neutral		very important

24. Appearance of Eyes

1	2	3	4	5
not important		neutral		very important

25. Digestion

1	2	3	4	5
not important		neutral		very important

26. Hips

1	2	3	4	5
not important		neutral		very important

27. Resistance to Illness

1	2	3	4	5
not important		neutral		very important

28. Legs

1	2	3	4	5
not important		neutral		very important

29. Appearance of Teeth

1	2	3	4	5
not important		neutral		very important

30. Sex Drive

1	2	3	4	5
not important		neutral		very important

31. Feet

1	2	3	4	5
not important		neutral		very important

32. Sleep

1	2	3	4	5
not important		neutral		very important

33. Voice

1	2	3	4	5
not important		neutral		very important

34. Health

1	2	3	4	5
not important		neutral		very important

35. Sex Activities

1	2	3	4	5
not important		neutral		very important

36. Knees

1	2	3	4	5
not important		neutral		very important

37. Posture

1	2	3	4	5
not important		neutral		very important

38. Face

1	2	3	4	5
not important		neutral		very important

39. Weight

1	2	3	4	5
not important		neutral		very important

40. Sex Organs

1	2	3	4	5
not important		neutral		very important

Now that you have completed this questionnaire, place it in the brown envelope and do not take it out again.

PROCEED TO CONCLUDING REMARKS

APPENDIX I

Return Rates Broken Down by Age and Sex

Table A

Return Rates Broken Down by Age and Sex

Sex	Age			
	Young	Middle-Aged	Senior	Total
Male				
Sets Distributed	61	39	27	127
Sets Returned	49	29	24	102
Sets Included in Study (correctly completed)	30	27	23	80
Female				
Sets Distributed	62	39	35	136
Sets Returned	49	27	31	107
Sets Included in Study (correctly completed)	30	25	29	84

Note: Of 263 questionnaire sets distributed, 209 were returned, representing a total return rate of 79.5%.

APPENDIX J

Response Percentages for Those Items With Which Males and Females Expressed the Most Satisfaction Most Frequently

Table A

Items With Which Males Expressed the Most Satisfaction Most Frequently

Age		Item	Percent Response*
Young (n=30)	1	Sex Drive	50.00 f
	2	Sex Activities	43.33 f
	3	Resistance to Illness	36.67 f
	4	Health	33.33 f
	5	Sex Organs	33.33 p
Middle-Aged (n=27)	1	Health	37.04 f
	2	Resistance to Illness	33.33 f
	3	Tolerance for Pain	29.67 f
	4	Appetite	29.67 f
	5	Energy Level	25.93 f
Senior (n=23)	1	Health	39.13 f
	2	Weight	39.13 p
	3	Hands	34.78 p
	4	Keenness of Senses	34.78 f
	5	Appearance of Eyes	34.78 p
		Digestion	34.78 f
		Resistance to Illness	34.78 f
		Sleep	34.78 f

* represents the percentage of subjects in that group who rated the item 'strong positive feelings' ('5' on the rating scale)

f represents a body function or process

p represents a body part

Table B

Items With Which Females Expressed the Most Satisfaction Most Frequently

Age		Item	Percent Response*
Young	1	Sex Organs	36.36 p
(n=30)	2	Health	36.67 f
	3	Sex Activities	33.33 f
	4	Sleep	33.33 f
	5	Resistance to Illness	33.33 f
Middle-Aged	1	Health	48.00 f
(n=25)	2	Muscular Strength	44.00 f
	3	Resistance to Illness	40.00 f
	4	Sleep	36.00 f
	5	Appearance of Eyes	36.00 p
		Facial Complexion	36.00 p
		Hair	36.00 p
Senior	1	Health	44.83 f
(n=29)	2	Weight	37.93 p
	3	Appetite	37.93 f
	4	Appearance of Eyes	34.48 p
	5	Resistance to Illness	34.48 f

* represents the percentage of subjects in that group who rated the item 'strong positive feelings' ('5' on the rating scale)

f represents a body function or process

p represents a body part

APPENDIX K

Response Percentages for Those Items Which Males and Females Considered Most Important Most Frequently

Table A

Items Which Males Considered Most Important Most Frequently

Age		Item	Percent Response*
Young (n=30)	1	Health	73.33 f
	2	Sex Activities	56.67 f
	3	Resistance to Illness	50.00 f
	4	Energy Level	50.00 f
	5	Physical Stamina	50.00 f
		Sex Drive	50.00 f
Middle-Aged (n=27)	1	Health	66.67 f
	2	Resistance to Illness	59.26 f
	3	Energy Level	48.15 f
	4	Physical Stamina	44.44 f
	5	Back	37.04 p
		Digestion	37.04 f
Senior (n=23)	1	Elimination	60.87 f
	2	Digestion	60.87 f
	3	Health	60.87 f
	4	Back	56.52 p
	5	Resistance to Illness	52.17 f

* represents the percentage of subjects in that group who rated the item as 'very important' ('5' on the rating scale)

f represents a body function or process

p represents a body part

Table B

Items Which Females Considered Most Important Most Frequently

Age		Item	Percent Response
Young (n=30)	1	Health	90.00 f
	2	Resistance to Illness	83.33 f
	3	Energy Level	73.33 f
	4	Sleep	63.33 f
	5	Hair	56.67 p
Middle-Aged (n=25)	1	Health	84.00 f
	2	Resistance to Illness	76.00 f
	3	Hair	68.00 p
	4	Appearance of Teeth	64.00 p
	5	Facial Complexion	60.00 p
Senior (n=29)	1	Health	72.41 f
	2	Resistance to Illness	62.07 f
	3	Appearance of Teeth	58.62 p
	4	Hair	55.17 p
	5	Physical Stamina	48.28 f

* represents the percentage of subjects in that group who rated the item as 'very important' ('5' on the rating scale)

f represents a body function or process

p represents a body part

APPENDIX L

Zero Order Correlation Coefficients Between Self Concept Scores and Cathexis for Body Aspects Among Males and Females

Table A

Zero Order Correlation Coefficients Between Self Concept Scores and Cathexis for Body Aspects Among Males

Item #	Item	r	p
27	Resistance to Illness	.525	.000
16	Body Build	.437	.000
9	Muscular Strength	.430	.000
19	Keenness of Senses	.401	.000
34	Health	.396	.000
18	Height	.373	.000
11	Energy Level	.363	.000
24	Appearance of Eyes	.357	.001
22	Arms	.350	.001
25	Digestion	.346	.001
20	Tolerance for Pain	.322	.002
39	Weight	.312	.002
32	Sleep	.314	.002
35	Sex Activities	.308	.003
23	Chest (or breasts)	.299	.004
12	Back	.296	.004
15	Chin	.292	.004
31	Feet	.289	.005
38	Face	.289	.005
21	Width of Shoulders	.282	.006
14	Age	.272	.007
8	Elimination	.262	.009
29	Appearance of Teeth	.260	.010
17	Profile	.254	.012
7	Physical Stamina	.253	.012
26	Hips	.250	.013
37	Posture	.246	.014
28	Legs	.237	.017
36	Knees	.235	.018
33	Voice	.229	.020
40	Sex Organs	.219	.026
4	Hands	.204	.035
3	Appetite	.157	.082
10	Waist	.148	.095
6	Nose	.123	.138
2	Facial Complexion	.113	.160
30	Sex Drive	.102	.184
13	Ears	.062	.293
1	Hair	-.048	.337
5	Distribution of Hair (over body)	.026	.410

Table B

Zero Order Correlation Coefficients Between Self Concept Scores and Cathexis for Body Aspects Among Females

Item #	Item	r	p
28	Legs	.367	.000
16	Body Build	.317	.002
31	Feet	.304	.002
17	Profile	.277	.005
21	Width of Shoulders	.272	.006
26	Hips	.259	.009
35	Sex Activities	.234	.016
18	Height	.214	.025
20	Tolerance for Pain	.189	.043
37	Posture	.185	.046
38	Face	.178	.052
9	Muscular Strength	.176	.055
25	Digestion	.174	.057
14	Age	.167	.065
30	Sex Drive	.166	.067
1	Hair	.162	.070
22	Arms	.158	.076
23	Chest (or breasts)	.158	.080
10	Waist	.154	.081
40	Sex Organs	.148	.090
36	Knees	.143	.097
6	Nose	.141	.100
34	Health	.128	.123
33	Voice	.126	.126
39	Weight	.123	.133
29	Appearance of Teeth	.114	.151
24	Appearance of Eyes	.113	.153
15	Chin	.100	.183
8	Elimination	-.092	.203
27	Resistance to Illness	.071	.260
11	Energy Level	.063	.286
7	Physical Stamina	.062	.288
19	Keenness of Senses	.057	.303
3	Appetite	.047	.334
4	Hands	.037	.369
32	Sleep	.027	.405
2	Facial Complexion	.019	.432
12	Back	.018	.436
13	Ears	.009	.469
5	Distribution of Hair (over body)	-.007	.476