CLOTHING INTEREST, LEISURE ACTIVITY CONTINUNITY AND THEIR ASSOCIATION TO CLOTHING FIT SATISFACTION FOR WOMEN 55 YEARS AND OLDER

by

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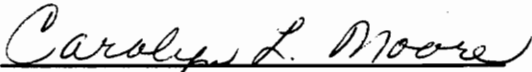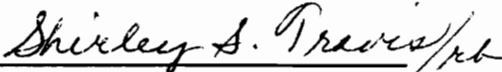
in

Clothing and Textiles

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to Clothing Fit Satisfaction for Women 55 Years and Older

by
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(ABSTRACT)

In this study, clothing fit concerns of women age 55 years and over will be associated with their level of clothing interest (psychological) and the social setting and frequency of their leisure activities (sociological). Subjects' body measurements with the body measurements in the PS 40-72 standard for sizing women's apparel (physiological) will be made. The data will be analyzed to determine indicators of continuity of clothing fit concerns.

The objectives for this study were ; (a) to identify current apparel fitting problems reported by the respondents; (b) to identify dissimilarity between PS 42-70 sizing standards and respondents reported current size of ready-to-wear dresses; (c) to examine current and recalled clothing interest of the respondents for continuity; (d) to determine the continuity of frequency and social setting of participants' recalled and current leisure activities; (e) to define the association between satisfaction of apparel fit with current clothing interests and with current leisure activities.

The waist, was reported as a fit problem by 67% of the sample. Less than 50% of the sample reporting fit problems reported fit problems at the neck, shoulder, and bust. The younger age group exceeded the older age group by a margin of only 4% for too tight fit at the waist. The younger group reported tight fit for the upper arm

and the maximum thigh more often the older group. The difference between the proportional relationship for: the sample and PS 42-70 standard in height and weight, back waist length and front waist length, shoulder to bust point and back of neck to center front waist, and shoulder length and armscye to waist was statistically significant at .001 to .01 for the comparison of the mean ratios. For 13 of 17 selected upper body measurements for size 12, 12 for size 14, and 10 for size 16 there was a significant difference between the subjects measurements and corresponding measures in the PS 42-70 standard. There was no signicant difference between current clothing interest levels and recalled clothing interest levels for subjects at ages spanning decades in their twenties and forties. A Duncan's (MRT) of the solo leisure activities and the group leisure activities show there to be a significant difference across the sample for the subjects in their twenties and forties. The subjects in the over 75 age group results were insignificant for the difference when they were in their sixties. The frequency of current leisure activities was different for the sample in their twenties and sixties. The mean scores for both age periods were not significantly different from the mean for when they were in their forties. There was no association found between clothing interest and satisfaction with apparel fit, between frequency of leisure activity and satisfaction with apparel fit or, between the setting of current leisure activity and satisfaction with apparel fit.

Earl Jeanes for letting go that I can be me. I thank my dear friend, Lilly Faison, just for being Lilly. I thank Jim "Doc" Henderson for his acceptance and encouragement of me to be me.

I thank my parents, Charlie and Hellon Rainer, for all the traits and values they inspire in me. I acknowledge and thank my brother, Willie Lee Rainer, for his encouraging support. There are not words grand enough to express the love, gratitude, respect, and joy I hold for my children, Tanya Michelle, Terri Lynell, and Torrey Dewayne Jeanes in their acceptance of my choice to "Go For It' for me.

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CHAPTER I

Introduction

Change has most often occurred after the need was demonstrated and the affected people demanded that change. Conformity to the demand for change is often dictated by the population of the petitioners, as is the case in the need for change in the fit and sizing of clothing by women age 55 years and older. The forecasted increase of this age cohort by the aging of the "baby boomers" (persons born from 1946 to 1964) has aroused providers of goods and services to identify the needs of the older consumer to better fill those needs.

The population of these petitioners is shown in the 1990 U S Census report where 51% of the total population is female of which 23% is age 55 and above. The female cohort age 55 years and over comprises 12% of the total population for the United States (U. S Bureau of the census, 1990). It is projected that by the year 2000 the female cohort 65 years and over will be even higher. Changing demographics will dramatically influence the way society conceptualizes and delivers goods and services to meet the everyday needs of its elderly.

The multidisciplinary field of gerontology provides direction for studying aging populations. Aging, seen as old age by many, is a life long experience and not something that just happens at the end of life (Ferraro, 1990). By the time individuals reach middle-age they have set psychological, sociological, and physiological standards by which they gauge their personal status and make adjustments. Older people attempt to preserve and

maintain this standard while going through the changes that occur in the process of normal aging (Atchley, 1989). This attempt to maintain or perpetuate a known or existing status is the basis for the theory of behavioral continuity.

Physical appearance in general, and clothing in particular, is a tangible factor influencing the fulfillment of needs, concerns, and choices that perpetuate a sense of well being in a life span. Clothing, at the basic level of need or concern, provides protection for the body from environmental extremes (Watkins, 1984). At a less physical level of need or concern, clothing influences self esteem (Kaiser, 1990), self-concept (Roach & Eicher, 1965), and belongingness (Ryan, 1966). Craig (1973) states that, "Attitudes toward clothing, like any other attitudes, are determined by past experience" (p. 161).

Attitudes and expectations toward the criteria of clothing fit is the sum of a persons experience with experimentation with clothing to achieve comfort. Shishoo (1990) and Stamper, Sharp, and Donnell, (1986) identify clothing fit by the correspondence of the dimensions and proportions of the garment to the dimensions and proportions of the body.

Clothing fit is perceived to be satisfactory when a garment meets three criteria of clothing concerns for the wearer: psychological, sociological, and physiological. In this study selected current and recalled psychological (clothing interest), sociological (leisure activities), and physiological (anthropometric measurements) aspects of clothing for women 55 years of age and over will be investigated to determine the indicators of continuity of clothing fit concerns.

CHAPTER II

REVIEW OF LITERATURE

The review of literature will address some of the characteristics and concerns of human aging. Aspects of aging will be discussed as they relate to clothing needs. Literature that relates to factors in the production and acquisition of clothing fit will be reviewed. The reviewed literature will be presented in the following manner: psychological aspects of aging and clothing; sociological aspects of aging and clothing; physiological aspects of aging and clothing; aspects of clothing sizing and fit; and aspects of acquiring clothing fit.

Psychological Aspects of Aging and Clothing

The psychology of human aging is a complex component of human development that encompasses the biological as well as the social aspects of an individual's life span (Birren, 1988). In healthy psychological development, individuals satisfy their needs in personal and practical matters, and accept that there are certainties and tasks necessary in survival; and they work them out (Frenkel-Brunswik, 1968). Schaie (1975) states

> Many aspects of psychological developments depend very much on the interaction of the individual with the culture that he lives in, and changes in the behavior of an individual over his life course may be much more affected by changes in the culture he lives in than by changes in his body (p.112).

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Becker (1968) attributes the conditions for change and stability in adult life to social structures. Focusing on the social context from which the aged individual's perceptions were rooted would help in understanding aging behavior patterns (Miller, 1979). Much of the psychological literature available on the elderly addresses aspects of personality and behavior adjustment in relation to the biological changes in the process of normal aging. Self-concept, attitudes, and gender, in addition to other factors, are contributors to stability and change in personality (France, 1990).

The relationship between the psychological well being of the consumer and clothing has received much attention from researchers in psychology and sociology. From infancy, clothing plays an important part in the development of self-identity both individually and within groups. Traditionally the infant is dressed in blue if it is a boy and in pink if the baby is a girl (Horn, 1975). Farmer and Gotwals (1982) state that "clothing is an extension of the self helping us to define who we are, what we like, and how we feel about ourself" (p. 3).

Self-esteem is one factor that influences clothing usage and satisfaction with clothing fit. A negative concept of one's body generally indicates a negative self-concept and serves to promote dissatisfaction with clothing fit (Kaiser, 1990; Sontag & Schlater, 1982). Self-concept and role identity, as they relate to clothing, may indicate clothing interest. In 1974 Gurel proposed the following definition for clothing interest;

Clothing interest behavior may be referred to as that part of human behavior specifically related to clothing, its selection, and its use, and its importance as a

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persistent interest center to an individual. Clothing interest behavior is made up of concerns for personal appearance and the management of clothing to maintain this appearance. It involves a willingness to experiment with the use of clothing, to be psychologically aware and curious about the effects of clothing on others, to use clothing to bolster self-concept and security, and to be interested in fashion and style. Concern for modesty in clothing, comfort and fit, and some degree of conformity to societal norms is also part of the personality pattern of a person manifesting high interest in clothing (p. 124-125).

The influencing dimensions of clothing interest levels were divided by Kaiser (1990) in the following manner: (a) concern with personal appearance, will spend time, money, and energy on appearance; (b) experimentation with appearance, willing to risk change in appearance to achieve the right look; (c) heightened awareness of clothing, focuses on details of clothing workmanship (d) enhancement of personal appearance, use of clothes to boost morale or express heightened attitude; and (e) enhancement of individuality, use of clothes to express distinctiveness and uniqueness.

Behavior that constitutes clothing interest is a determining variable in clothing expenditure. In comparison of younger and older households, Chung (1990) found mean expenditures by elderly households to be the lower of the two groups. The lower mean was attributed to, among other factors, reduced clothing interest. In contrast, other studies have found elderly consumers have high scores on clothing interest scales. Tychniewicz

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and Gonzales (1978) found little variation in the interest levels in aesthetics regarding clothing for their sample, neither as a whole or in age groups. Elderly subjects with high clothing interest scores are well educated and spend a significant dollar amount on clothing (Neal, Schwenk & Courtless, 1990).

Horinka (1975) found that men over the age of 65 years had an interest in clothing; women of the same age cohort had a much greater interest. She also found that respondents at the lower income level held a higher clothing interest score than those at the higher income level. Horinka (1975) also concluded that the clothing interest of the subjects was not affected by their activity level which she defined as the number of organizations they belonged to and their participation level in each organization.

Sociological Aspects of Aging and Clothing

The sociological dimensions of aging focus on the individuals' strategies of adaptation to change in their social structure. One social change that has been studied extensively in the United States is retirement where the accepted age for retirement is 65 years. Retirement removes the worker from the employee role and prompts an individual to initiate a new role in society. For many people, their occupational role is their key social role. Some individuals are so entrenched in the Protestant work ethic that they return to work part-time or start new careers after retirement. This can be attributed to the concept that in addition to the skills of a work role, the individual takes on the attitudes, superstitions, and outward appearance of their work group (Kaplan, 1979).

The change of social role by retirement and the implications of social role change have been studied in sociology and gerontology. Throughout life, most individuals interact in numerous social structures and within each structure hold an identity unique to that structure, a social role. These "roles, include occupational roles, family roles, and sex-age roles" (Horn, 1975 p. 186).

Clothing is often an indicator of role status within a social structure, especially the occupational role. Often the work role can be identified by the individual's attire. Coveralls and aprons identify a manual laborer, whereas suits and sports clothes identify a white-collar worker (Horn, 1975). Within each social structure an individual seeks approval and acceptance of ones peers to generate a sense of belonging. Douty (1963) states that "clothes worn by individuals do have a definite and measurable influence on the impressions they make on other people" (p. 197). Clothing is often used as a means of gaining social approval and can express conformity or individuality in the presentation of self (Miller, Davis, & Rowold, 1982).

Researchers have studied the retirement role to identify changes in use of time. Aging individuals use their time in volunteerism and/or participation in leisure activities (activities participated in at the individual's convenience just for the sake of doing the activity). Retirees volunteer their time for worthy causes and/or because they need to remain productive. The concept of leisure is considered almost a "sin", by those in the American value structure for whom the work ethic is the commanding role (Gordan, Gaitz, & Scott, 1973).

In this study, leisure and how it is used by the elderly is posited as a social structure. Gordon, Gaitz, and Scott (1976) offer the following conceptualization for leisure in the <u>Handbook of Aging and the Social Sciences</u>:

> Leisure is personally expressive discretionary activity, varying in intensity
> of involvement from relaxation and diversion at the low end of the
> continuum, through personal development and creativity at higher levels,
> up to sensual transcendence at the highest levels of cognitive, emotional,
> and physical involvement (p, 316).

The social role of leisure is defined by the leisure activity in which one participates. A leisure activity can be an individual or group pursuit; learning a new skill, such as sculpturing; being physically active and independent of others, such as jogging; being physically active in a group, such as a team sport; sedentary and done by one, such as reading; or sedentary in a group, such as playing bridge (Peppers, 1976). Mancini and Orthner (1982) classified leisure activities into three patterns based on the amount of interpersonal interaction involved. Pattern one includes independent activities done by individuals with little interaction with others such as reading, sewing, or fishing. Pattern two involves parallel activities which are independent activities done in a group such as watching television, attending a movie or athletic event. Pattern three includes collaborative activities done through interaction with others such as visiting friends and relatives or playing games.

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Studies have been conducted to determine the value of leisure involvement for the retiree (Bull, 1982). Although work takes up most of an adult's time, the majority of people participate in some type of leisure. According to Bosse and Ekerdt (1981) retirees do not participate more or less in leisure activities but maintain a continuity of leisure activities. Whether an individual's leisure lifestyle requires physical exertion, is sedentary, solitary, or any combination of these patterns, self-development and morale is often promoted. Activity in a social situation can give people a sense of belonging to a social group (Mancini & Orthner, 1982). Regardless of age or circumstance of life, an individual's appearance is a contributing element in one's relationship to others (Hoffman, 1979).

After retirement, adjusting to a more leisure role may include developing a new identity and/or establishing a sense of belonging. Developing new relationships or interests in activities with persons outside the daily family/friend circle has implications for aiding healthy and happy aging (Palmore, 1979). Hoffman (1970) stated that "in developing new social relationships, in maintaining a positive self-image, and in providing ego support, clothing has special significance for older women".

For older women experiencing the loss of employment status after retirement and the loss of family and friends, the effective use of clothing to present an attractive appearance can provide an ego support. Belonging is a dominant factor in the development of any social role (Mancini & Orthner, 1982). Role performance and life choices may be affected by clothing (Farmer & Gotwals, 1982). It is important that one's

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clothing is congruent with the role one holds in a social setting to maintain a sense of acceptance and belonging.

Physiological Aspects of Aging and Clothing

All living organisms experience physiological changes as they go through the normal process of aging. There are growth changes that occur with the human organism from conception to birth and then from birth through maturation. Atchley (1983) states, "human bodies go through a period of maturation during which the body grows and develops to its peak level of functioning; a period of maturity, during which physical functioning remains at peak levels; and a period of aging during which the body gradually loses its capacity for peak performance" (p. 20).

Applied research in gerontology is directed by the problems and needs of individuals whose chronological age is past the period of maturity. Normal aging in the United States, according to Atchley (1989), is living well into the later years with "no disabling, chronic, or acute disease". For the aged such illness as heart disease, cancer, stroke and arteriosclerosis are the major cause of death and disability. Infectious diseases and some other acute diseases have been reduced by advances in public health and by medical efforts (Estes, Fox, & Mahoney, 1986).

The first studies in gerontology that did not focus on the frail or impaired aged were the Duke Longitudinal Studies. The first of these studies was implemented from 1955 through 1976; the second study from 1968 through 1980. The Duke Longitudinal

Studies documented the existence and persistence of heterogeneity or individuality in behavioral, social, and biological adaptation strategies, by the elderly, in their pursuit of well-being (Maddox, 1987). The Longitudinal Studies provided data that motivated researchers to examine aging as a process of long life that has individually differing traits instead of all aging humans being dealt with as a homogeneous group.

In the biological or physiological process of aging, changes occur that are not detrimental to the health of the individual but are visually apparent and can affect comfort and fit of clothing. Tate and Glisson (1961) state that, with clothing, from the youngest to the oldest person, comfort is probably the strongest concern. Changes in the skin can influence clothing comfort as an individual ages. The skin becomes dry and loses its elasticity due to the loss or shifting of body fat. These changes leave the skin sensitive and susceptible to irritation by clothing made of rough or scratchy textured material (Tate & Glisson, 1961; Timiras, 1972).

Concerns for clothing fit for older women was addressed as early as 1953. Blair (1953) reported that for women age 45 to 65 years would have to maintain what they had found to be their ideal weight at age 35 to find well fitting ready-to-wear clothing. The 45 to 65 year old subjects in the Blair (1953) study cited problems with added weight, thickened waist, heavier upper arms, sagging busts, and rounded shoulders.

For the older adult, the settling of the spinal column, due to the decrease in the bone density of the vertebrae, produces a shortening and bending. These changes may appear as a curve on the upper back, the bowing of the head, or an involution of the

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skeleton (Hoffman, 1979; Tate & Glisson, 1961; Timiras, 1972). A decline in stature also occurs as an individual advances in age. Along with this decrease in stature the relocation of body fat may cause an increase in bulk, particularly in waistlines and hips (, 1972, Woodsen & Horridige, 1990).

Aspects of Clothing Sizing and Fit

Clothing fit is difficult to measure or define but is a major factor in determining garment comfort (Delk & Cassill, 1989). The individual's concept of clothing comfort can relate to the garments tendency to restrict or bind, produce pressure or friction or simply distract the wearer. Shishoo (1990) and Stamper, Sharp, and Donnell, (1986) identify clothing fit by the correspondence of the dimensions and proportions of the garment to the dimensions and proportions of the body. Farmer and Gotwals (1982) describe a garment that fits well as one that flatters the body by accentuating positive features and camouflaging problems.

Clothing fit has been conceptualized in two dimensions: static or structural fit and dynamic or functional fit. Huck (1988) describes static/structural fit as garment fit that corresponds with the dimensions of the stationary body, while dynamic/functional fit is garment fit that corresponds with the dimensions of the body in motion.

Before the early part of this century clothing fit was individualized because clothing was made by tailors, dressmakers, and home sewers (Tamburrino, 1992). With the advent of the ready-to-wear industry came the need to mass produce garments that

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meet the fitting needs of many. Farmer and Gotwals (1982) state that "Garments must be made to statistical models, not real people..." for mass-produced apparel that fit the greatest number of individuals (preface p. 5).

Various studies have been conducted that are basic to providing the clothing fit that today's consumers demand. Clothing fit that is responsive to the body proportions and dimensions of the wearer has been the focus of extensive studies. Sheldon (1954) developed a system called somatotyping, a procedure that identifies body types, which has been used to investigate improvement of clothing fit. In somatotyping there are three body types: endomorphic bodies are round, soft, pear shaped with limbs that appear short with rounded shoulders; mesomorphic bodies are square and rigorous with prominent muscles, small abdomen, shoulders predominate with large and strong limbs; ectomorphic bodies are fragile and slender with minimum fat and muscle, wide drooped shoulders with long spindly limbs (Croney, 1971). It is not uncommon for an individual to have a combination of the body types. Does the physiological changes of normal aging recharacterize a body from one somatotype to another or does it simply exhibit a combination of somatotypes?

Beyond and within body typing is anthropometric measurements which are fundamental to establishing a sizing standard. Anthropometry is a precise system of measuring the body in segments, measuring each segment by length and circumference (Lohman, Roche, & Martorell, 1988). Such detailed measurement data are necessary to develop apparel sizes that represent the numerous sets of body proportions and dimensions. Studies with anthropometric data have shown there to be detectable

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differences by race, sex, and by age in body measurements (Giddings & Boles 1990; Milina, 1973).

Anthropometric data is collected and used extensively by the military in the design of military equipment and apparel (Green, 1980). The earliest non-military anthropometric study of U S women to be conducted for the purpose of apparel production was the O'Brien study done in the late 1930's (McConville, Tebbette, & Churchill, 1979). The O'Brien (1941) anthropometric data make up the PS 42-70 publication, which is the established standard for women's apparel.

A size designation assigned to a garment is an indicator to the consumer of the body dimension and proportions or body measurements that the garment will fit (Farmer & Gotwals, 1982). In 1942 a sizing standard was established with 45 body measurements for each designated size. The measurement data were collected by O'Brien in 1939-1940 from 14,689 white women age 18 to over 80 years, from 7 states (Arkansas, California, Illinois, Maryland, New Jersey, North Carolina and Pennsylvania), and the District of Columbia. Only 2% of the sample was over the age of 60 years. The standards were implemented by the U S Department of Commerce. In 1970 a revised standard was implemented using the same measurement data from the 1942 data bank. The revised standard for sizing women's apparel is called PS 42-70 with added size categories (e.g. junior, misses or half sizes). The implementation of the PS 42-70 sizing standard in the apparel industry is voluntary and there is no uniformity of sizing between apparel firms.

O'Brien (1941) reported that there was a difference between the measurements of the women 60 years and older and the rest of the sample. However, sizing standards developed from that data did not make any allowances for this age differences.

Aspects of Acquiring Clothing Fit

The intended use of the garment affects clothing fit. For correct fit some garments fit close to the body (e.g., bathing suits, leggings and leotards); while other garments hang loosely about the body (e.g., nightgowns, capes and rain wear). Clothing in addition to providing cover for the body and fulfilling specialized needs (i.e. enhance thermal qualities, allowance for movement, protective qualities, and enhancement of safety), fulfills the psychological need to ornament the body (Watkins 1974). Studies of the earliest use of clothing ranks the importance of aesthetic expression through body adornment with the importance of protection for the body (Kaiser, 1985). Clothing satisfies the desire to be expressive through body adornment without invading or distorting the body. Lamb and Kallal (1992) place meeting the aesthetic needs first in three priorities when designing apparel. Aesthetic satisfaction with clothing is derived from the subjective perception of the wearer. Clothing choice and use are influenced and can even be dictated by the society or culture one lives in and the role held in that culture, e. g. uniforms for the military, postal service, and the "white collar worker"(p. 15). An individual holds many roles within the culture; the individual knows the expectations of her/his role peers and strives to meet these expectations in behavior and

in dress (Ryan, 1966). Clothing fit and aesthetic satisfaction, in part, is met by how the lines of the garment correspond with the contours of the body. The contouring lines of the garment are created by placement of darts and seams. A garment that fits the female upper body or bodice is described by Rutan (1977) in the following manner;

The shoulder seam should fall an top of the natural shoulder and 1″ behind the ear lobe as you look straight ahead. The neckline should be smooth at the base of the neck. The seam at the top of a set in sleeve should rest comfortably over the bone that joins your arm and shoulder. The bodice darts should point to the crest of your bust. The waist seam should fall on your natural waistline, the smallest part of you midsection (p. 9).

When lines and contours of a garment do not correspond to the wearer's body, dissatisfaction with the garment's fit may be experienced.

Clothing that does not fit can distract attention from and reduce the confidence of the wearer. Liechty, Pottberg and Rasband (1986) describe two possible incidents of poorly fitted clothing; "Clothes that are too large can get in your way and create a comic appearance" while "Clothes too small restrict movement, appear immodest and offensive" (p. 55). Evidence of dissatisfaction with the aesthetics and fit of available apparel is shown in a study done in 1953 by Blair. The sample of 361 female subjects age 45 to 65 who responded to a questionnaire identified strategies to compensate for the lack of fit with ready-to-wear included: purchasing separates of differing sizes, and alterations.

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Alterations of ready-to-wear consist of any structural operation that is performed on a finished garment to change any proportion, dimension or feature of the garment to provide desired comfort or appearance, e. g., make it longer, shorter, larger, smaller, or to add buttons or other trims (Liechty, Pottberg & Rasband, 1986; Stamper, Sharp, & Donnell, 1986). Bratcher (1972) found that of 100 women, age 65 years and over, 59 required alterations for their ready-to-wear to attain fit. Hargett (1963) looked at problems associated with buying a ready-to-wear dress for 101 women, age 65 years and above, and 81 of the subjects indicated a need for alterations to achieve desired fit.

Apparel consumers seek clothing that satisfy their needs. The clothing needs of the consumer is affected by the intended use of the garment, and that use can be for protection, to exhibit or camouflage the body, or to indicate a cultural role. Whether a garment is lose or close to the body the lines and contours of the garment must correspond with those of the wearers' body for satisfactory fit. Very often when satisfactory fit is not available with ready-to-wear, the cost of the garment is increased to achieve fit through alterations. Thus, adding an extra financial burden for the elderly person on a fixed income.

Summary

The review of the related literature gives evidence of problems in clothing fit for the elderly. Indications are that clothing can be a contributing vehicle for sustaining a healthy psychological (Farmer & Gotwals, 1982), sociological (Miller, Davis, & Rowold,

1982), perception throughout an individual's life span. Physiological changes that affect adults in the later years have been broadly identified (Blair, 1953; Tate & Glisson, 1961; & Meisami, 1972). These changes are as distinguishable to later years as changes are to earlier, infant and childhood, stages in the human life span.

Recommended standard measurements of PS 42-70, for sizing of women's apparel fit the body proportions and dimensions for the younger stages of life, 35 years and younger (O'Brien, 1941; and Blair, 1953). Ps 42-70 data fails to represent women age 55 and over. Clothing that does not fit can distract attention from and reduce the confidence of the wearer (Liechty, Pottberg & Rasband, 1986).

Statement of Problem

In this study, clothing fit concerns of women age 55 years and over will be associated with their level of clothing interest (psychological) and the social setting and frequency of their leisure activities (sociological). Subjects' body measurements with the body measurements in the PS 40-72 standard for sizing women's apparel (physiological) will be made. The data will be analyzed to determine indicators of continuity of clothing fit concerns.

CHAPTER III

SETTING OF THE PROBLEM

Theoretical Framework

The theory of continuity is applied to the concerns of clothing fit for women age 55 years and above. In this age cohort, cross sectional studies have been conducted indicating differing levels of satisfaction with the fit of clothing. Levels of clothing fit satisfaction has been attributed to changes in clothing interest, activity levels, and changes in body dimensions and proportions as a result of the aging process.

The literature that deals with clothing and the elderly apparel consumer address the findings only as the individual is affected in their latter years. Aging is a process that is life long (Ferraro, 1990). Clothing is used throughout life (Horn, 1968; Ryan, 1966). In addressing the elderly individuals' concerns with clothing, clothing fit specifically, is there evidence that the clothing concerns are a product of aging or a continued factor throughout life?

This study addresses some of the factors that influence the choice, acquisition and use of clothing as they apply to women age 55 years and older. The sample representing this cohort was viewed in relation to Branson and Sweeney's (1991) "Conceptualization and Measurement of Clothing Comfort". They conclude that judgement of clothing comfort is a triad consisting of the person, the clothing, and the environment. Branson and Sweeney (1991) further suggest that each element of the triad has both physical and social-psychological elements that influence physiological and/or perceptual judgements

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of clothing comfort. The Branson and Sweeney (1991) model includes a filter component/process by which the individual incorporates past experiences or remembrances to judge a garment's comfort.

The filter element of the Branson and Sweeney (1991) model has close similarities to the Theory of Continuity. The basis of the theory of continuity is that as older adults go through changes in the process of normal aging and in an attempt to maintain their known psychological, sociological, and physiological status they use adaptation strategies that are reflective of past experiences (Atchley, 1989). The continuity theory is useful "for understanding adaptation of individuals to their changing social contexts, both as they age and from social change" (Morgan, 1976). Continuity of aging is a concept supported by the heterogeneity of the aging cohort (George L. Maddox, 1987). Convey (1981) states that people with well defined patterns of life style are more likely to carry those activities, roles, and patterns into old age. "Claims that older people adapt to old age in a variety of ways is the essence of the theory of continuity". Individuals age differently adapting to and coping with the normal changes of aging in ways that satisfy their individual standards and basic human needs.

The purpose of this study is to investigate selected aspects of the psychological (clothing interest), sociological (leisure activities), and physiological (body measurements) changes in the process of normal aging for a group of women age 55 years and over and determine indicators of continuity of clothing fit concerns.

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Objectives

Psychological, sociological, and physiological changes that occur as an individual grows older may influence one's satisfaction with the fit of apparel. The purpose of this study is to investigate selected aspects of these changes and their relationships to self-reported problems with fit of apparel. Current and recalled clothing interest measures will be used to determine one type of psychological change. Current and recalled leisure activity will be used as a measure of sociological change. Physiological changes will be assessed by comparing anthropometric measurements of females age 55 years and over with the existing apparel sizing standard, PS 42-70. The relationship of clothing adaptation strategies to each of these changes will be investigated to determine continuity or discontinuity in clothing concerns and behavior. The following are the objectives for this study:

1. To describe the respondents with selected demographics and clothing acquisition behavior.

2. To identify current apparel fitting problems reported by the respondents.

3. To compare actual upper body measurements of respondents with body measurements in the current PS 42-70 sizing standards for the respondents reported current size of ready-to-wear dresses.

4. To examine current and recalled clothing interest of the respondents.

5. To determine the frequency and social environment of the participants' recalled and present leisure activities.

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6. To define the relationship between satisfaction of apparel fit and current clothing interests.

7. To define the relationship between satisfaction of apparel fit and current leisure activities.

Hypothesis and Rationales

The following hypothesis were formulated based on the previously stated objectives:

Hypothesis 1a: There will be problems reported most frequently with the waist and the selected upper body areas of;

~ necklines

~ bust lines

~ shoulder seams

Hypothesis 1b: There will be a higher percentage of reported problems with tight waist for younger respondents than older respondents.

Hypothesis 1c: There will be a higher percentage of reported problems with loose fit for older respondents than for younger respondents.

Rationale: In the process of normal aging and the phase of post-maturity, physical changes occur with the body as reduced height, added weight, increased bulk at the hips and waistline, sagging busts and rounded shoulders

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(Hoffman, Tate & Glissen, 1961;   & Meisami, 1972; Woodsen & Horridige, 1990).

Hypothesis 2a: There will be differences in proportional relationships between selected body measures for the sample by age for;

~ height and weight ratios

~ back waist length and front waist length ratio

~ shoulder to waist and bust to waist ratio

~ shoulder length and armscye to waist ratio

Hypothesis 2b: There will be differences in selected body measurements of the subjects and corresponding measurements in the PS 42-70 standard for subjects currently purchased ready-to-wear dress size

Rationale: Same as rationale for hypothesis one (1).

Hypothesis 3:   There will be no difference in current clothing interest levels and recalled clothing interest levels for;

~ age 20 years

~ age 40 years.

Rationale: Studies have shown elderly or post-maturity subjects have an interest in clothing; in some cases a high interest (Horinka, 1975; Neal, Schwenk, & Courtless, 1990).

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Hypothesis 4a: There will be a change in the social setting (group or individual)

of current leisure activities of the sample compared to recalled

leisure activities for;

~ age 20 years

~ age 40 years

~ age 60 years (respondents 75 years and over).

Hypothesis 4b: There will be an increase in the frequency of current leisure

activities of the sample compared to recalled leisure activities for;

~ age 20 years

~ age 40 years

~ age 60 years (respondents 75 and over).

Rationale: After retirement, adjusting to a more leisure role may include developing

a new identity and/or establishing a sense of belonging. Developing new

relationships or interests in activities with persons outside the daily

family/friend circle has implications for aiding healthy and happy

aging (Palmore, 1979).

Hypothesis 5a: There will be an association between the setting (group or

individual) of current leisure activity and satisfaction with apparel

fit.

Hypothesis 5b: There will be an association between frequency of leisure activity and satisfaction with apparel fit.

Rationale: Clothing is often used as a means of gaining social approval and can express conformity or individuality in the presentation of self (Miller, Davis, & Rowold, 1982).

Hypothesis 5c: There will be an association between clothing interest and satisfaction with apparel fit.

Rationale: In defining clothing interest Gurel (1974) included the desire for comfort and fit as part of the personality pattern of a person manifesting high interest in clothing.

Operational Definitions

1) Clothing interest - "Clothing interest behavior is that part

of human behavior specifically related to clothing, its selection, its use, and its

importance as a persistent interest center to an individual. Clothing interest

includes the use of clothing to bolster self-concept and security, and exhibited

attention to fashion and style. Concern for modesty in clothing, comfort and fit,

and some degree of conformity to societal norms is also part of the personality

pattern of a person manifesting high interest in clothing (Gurel, 1974).

2) Elderly - persons who are in the stage of their life cycle older or senior men

and women age 55 years or older.

3) Fit satisfaction - self assessment of the congruence between the dimensions and

proportions of the garment with the dimensions and proportions of the body

(Shishoo, 1990; and Stamper, Sharp, & Donnell, 1986).

4) Leisure time spent in non occupational or non economical

pursuits (Gordon, Gaitz, and Scott, 1976).

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5) <u>Leisure activities</u> any activity performed or participated in for recreation, personal growth and\or service to others but not for economic gain (Gordon, Gaitz, and Scott, 1976).

6) <u>Normal Aging</u> the regular changes that occur in mature adults with no acute, chronic or disabling disease (Atchley, 1989).

7) <u>Post-maturity</u> - the period following peak adult physical functioning; the stage of development when changes in the body's physical shape and structure from aging become apparent, around the age of 55 years for women.

8) <u>Ready-to-wear</u> - apparel made available for purchase that is complete in construction and can be worn from the retailers rack.

9) <u>Social environment</u> - the setting of an activity. One setting is solitary or individual, an independent activity done alone. A second setting is collaborative or group, activities done through interaction with others (Mancini and Orthner 1982).

Limitations

Because the sample is a convenience sample, the results cannot be generalized to all women age 55 years and older.

Sample is composed of volunteers who were dissatisfied or especially concerned with clothing.

Assumptions

Subjects understood the questions and gave honest answers.

CHAPTER IV

METHODS AND PROCEDURES

ASTM National Sizing Study

The national study by the ASTM's D-13 Subcommittee on Body Measurements and Sizing was started as part of a direct consumer to producer interchange on children's apparel sizes. Success with the development of children's apparel sizing brought to focus the apparent need for a sizing research base. This base would have documented, factual data that could be combined with other anthropological findings to produce a more satisfactory apparel sizing system. The potential audience was reviewed, and it was decided to target a rapidly growing and under studied clientele. The elderly met this qualification and a New Initiative priority was established (ASTM/ES-USDA/NEHC, 1988).

ASTM's study provided an opportunity for researchers across the country to investigate factors associated with proper fit of apparel. Personal experience with a five feet, ten inch body with broad shoulders, long arms, and long legs generated my interest in the fit of apparel because I never owned a ready-to-wear long sleeved garment for females with sufficient sleeve length and shoulder width. The ASTM data will be used in the development of new sizing standards for the elderly female.

The coordinator of the ASTM study for the Commonwealth of Virginia was a Virginia Cooperative Extension (VCE) clothing and textiles specialist and faculty member of the Clothing and Textiles Department (CT). Training was held in Richmond, Virginia

on July 16th and 17th, 1991. The sessions were conducted by Drs. Goldsberry and Reich, coordinators of the national study. Trainees were given instruction for the correct use of the instruments.

The national ASTM study included a battery of 57 body measurements as specified in the PS 42-70 (US department of Commerce, 1971) and an interview questionnaire. The questionnaire consisted of demographic questions (age, ethnicity and income), items related to clothing acquisition, size preference for ready-to wear and commercial patterns, alterations needed, fitting problems, and desired labeling information. Items on size preference and fitting problems have multiple responses (see Appendix B).

Data Collection Sites

The data collection sites were selected by the individuals who recruited the participants. These sites met the following criteria: had a private dressing area or room for the subjects; had an area or room for the subjects to wait if necessary; and a data collection area or room with space for a table, a straight chair, an upright hospital scale, and three people - the recorder, the person taking the measurements, and the subject. The area or room in which the measurements were taken had to be large enough for the recorder to be seated at the table, and the subject and measurer to move around comfortably while taking the measurements.

Measurement Equipment

The ASTM data collecting kit included measuring tapes, L-squares, and a goniometer for taking dimensional measurements. All measurements except weight and shoulder slope were taken in metric units (centimeters). The height and weight (in pounds) were taken with an upright hospital scale provided by this researcher.

The ASTM committee provided fitting suits. The Ultra Fit body suit, a soft spandex mid-thigh leotard is designed with stretchable tapes that identify the body sites to be measured. The body suits were labeled to indicate the size designation; X-small, small, medium, large, X-large, 2X-large, and 3X-large.

The participants' measurements were taken in the Ultra Fit body suit selected according to the height, weight, bust, and hip measurements reported by the subject. The size selected could not shape or restrict the body so that measurements were inaccurate. The suits were worn over the subjects' underwear including any or all of the following; bra, panties, pantyhose, and support or foundation garments. The measurements were taken in accordance with the instruction provided by the ASTM committee (Appendix C).

INSTRUMENT DEVELOPMENT FOR VIRGINIA STUDY

Leisure activity questions were modified from a leisure activity instrument listed in the Research Instruments in Social Gerontology, titled Leisure Activity Score (S. R. Sherman, 1973). The clothing interest instrument was developed in 1960 by Ebeling as part of her Master's Thesis. In 1975, Horinka used the instrument, performed a Kuder-

Richardson Formula 20 test and found that the women's clothing interest scores had a non-stratified reliability of 0.703 and a mean inter-item correlation of 0.145.

VIRGINIA PILOT

Before the pilot test, persons who would collect data were trained by Drs. Goldsberry and Reich so that data collection would be standardized. To reduce variability in data collection, design faculty who had been involved in sizing research at Virginia Tech were trained by the ASTM collection methods. All data would be collected by these four trained researchers to increase precision and accuracy in data collection. Researchers practiced procedures before the pilot.

The pilot study was conducted according to the ASTM National study and with the assistance of VCE agents and volunteers in Patrick and Hanover counties. Patrick County, a rural southwest Virginia county, and Hanover County, an urban area located north of Richmond, were selected for the pilot. Volunteers from the participating counties, served as recorders. Recorders had been trained by one of the following methods: attended the state training session, had read through the training manual, or watched the training video tape.

Modification of Virginia Instrument

As a result of the pilot, it was determined that modification of the Virginia instrument was required (Appendix D). Modification included creating an equal number

of solitary and socially interactive/group activity items. Also, to obtain a past leisure activity score, the same list of activities were repeated to ascertain the subjects' recalled activity preference and frequency in their 20's and 40's. Subjects over 75 years were asked to respond to the same questions for their 60's.

Clothing interest items were modified to address past and current clothing interest. Selected items were repeated to solicit the subjects' recollection of their clothing interest in their 20's and 40's. Additionally, a list of past fitting problem items were designed to correspond with the current fitting problem items provided through the national study. Demographic items concerning education level, employment status, marital status, number of children, and grandchildren were added (Appendix D).

Sampling Design

The purposive sample (Richardson & Kilty, 1991) consisted of female subjects 55 years and over who were ambulatory. Richardson and Kilty (1991) describes a purposive sample as a sample drawn when no list of potential subjects is available. These subjects were selected by VCE agents and/or volunteers in participating units. Participation was voluntary. The subjects, who desired, were given a complimentary copy of their measurements.

Statistical analysis

Analysis of the hypotheses was done with the <u>SAS</u> statistical program. The frequency procedure was used to identify groups and cross-tabulation, t-test, and ANOVA to ascertain the level of relationship between groups and variables.

This researcher expected there to be a detectable relationship between the variables of leisure activity, clothing interest and the anthropometric measurements of the subjects with their reported fulfillment of clothing fit concerns.

CHAPTER V

RESULTS AND DISCUSSION

SAMPLE DEMOGRAPHICS

The purpose of this study was to determine the interrelationship between clothing interest, leisure activity, and satisfaction of clothing fit and explore the continuity of clothing interest for women age 55 years and older. The geographical representation was south-east and south-west Virginia.

The sample consisted of 122 women age 55 to 88 years. The majority of the sample were Caucasian, at 78%, as was the national sample at 90.7%; 22% of this study was Black. An objective for this study was to collect data from a sample that is 50% Black and 50% Caucasian. The desire for such a racial division was to investigate the anthropometric correlation between Black and Caucasian women age 55 years and older. Table 1, shows demographic percentages for this sample, and the national study as they apply.

More than 60% of the Virginia sample were in the $10,000 to $30,000 annual income range where 50% of the national sample were in this income range. The under $10,000 annual income (low-Income) group was least represented at 15% and the above $30,000 (high-income) were at 20% representation.

Additionally, more than half of the Virginia sample at 57% were married and 33% were widows. The majority of the sample had "finished high school" at 38%, where 33% had "some college", and the education levels of "less than high school" or "college

degree" were less represented. The subjects' employment status was 80% employed and 20% retired.

TABLE 1. Demographics of Subjects

DEMOGRAPHIC CATEGORIES	Sample Frequency	Sample Percent	National Sample
Age:			
Younger (55 to 67 yrs)	64	52.5	
National Sample (55 to 64 yrs)			37.1
Older (68 to 88 yrs)	58	47.5	
National Sample (65 and older)		.	62.8
RACE:			
Black	27	22.0	5.9
Caucasian	96	78.0	90.7
INCOME:			
< $10,000	16	14.5	16.0
$10,001 - $20,000	34	30.9	28.0
$20,001 - $30,000	38	34.5	25.0
> $30,000	22	20.0	31.0
MARTIAL STATUS:			
Married	70	57.9	NA
Widow	40	33.1	NA
Divorced	6	5.0	NA
Never Married	5	4.1	NA
EDUCATION LEVEL:			
< High School	16	13.2	NA
High School	46	38.0	NA
Some College	37	30.6	NA
College Degree	22	18.2	NA
EMPLOYMENT STATUS:			
Employed	96	80.0	NA
Retired	24	20.0	NA

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ANALYSIS OF FIT PROBLEMS

HYPOTHESIS 1a

An integral part in the theory of continuity is change, it is the behaviors of adaptation to change that is the measure of continuity (Atchley, 1983). For the post-maturity female changes in the dimension and proportions of her body promotes adaptation strategies to acquire satisfactory fit with apparel. Dissatisfaction with apparel fit is expressed as apparel fit problems. It was hypothesized that fit problems would be reported for the areas of the neck, shoulder, bust and waist more often than other areas of the body. The hypothesis was rejected for all sites except the waist. Results of the reported fit problems are given in Table 2.1.

A frequency procedure of fit problems showed fewer than 50% reporting problems with the neck, shoulder, and bust, with the bust being highest at 42%. Probable fitting problems in these areas are suggested by the normal changes of aging as curvature of the spine, rounding of the shoulders and sagging of the bust line occurs.

Fit problems at the waist were reported by 67% of the sample. This finding corresponds with results in earlier studies of fit problems for women in the post-maturity years and is most often associated with relocation of body fat. Of the 67% reporting problems at the waist, 34% reported that the waist of garments was too high or too low. This is an indication that problems with proper fit at the waist goes beyond the thickening of the waist that has been reported in previous studies.

TABLE 2.1. Reported Fitting Problems and Type of Fitting Problem by Body/Garment Area.

Body Garment Area	Problem		*Type of Problem					
	No	*Yes	Tight	Loose	High	Low	Long	Short
	F	F	F	F	F	F	F	F
	%	%	%	%	%	%	%	%
Neck	77	46	6	17	10	13		
	62.6	37.4	13.0	37.0	21.7	28.3		
Shoulder Seam	75	47						
	58.5	41.5						
Back Width	105	18						
	85.4	14.6						
Sleeve	38	85					52	33
	30.9	69.1					61.2	38.8
Armhole	101	22	17	5				
	82.1	17.9	77.3	22.7				
Upper Arm	97	26	24	2				
	78.9	21.1	92.3	7.7				
Bust	72	51	34	12	2	3		
	58.5	41.5	66.7	23.5	3.9	5.9		
Waist	41	82	43	11	13	15		
	33.3	66.7	52.4	13.4	15.9	18.3		
Abdomen	68	55	50	5				
	55.3	44.7	90.9	9.1				

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	No	*Yes	Tight	Loose	High	Low	Long	Short
	81	42	32	9				
High Hip	65.9	34.1	78.0	22.0				
Full Hip	74	48	35	10	1	2		
	60.7	39.3	72.9	20.8	2.1	4.2		
	96	27	18	9				
Thigh	78.0	22.0	66.7	33.3				
	44	79						
Dress Length	35.8	64.2						
	35	87					75	12
Pant Length	28.7	71.3					86.2	13.7
	66	55	12	4			11	28
Crotch	54.5	45.5	21.8	7.3			20.0	50.9

NOTE: * = only "yes" responses in problem type analysis
F = frequency
% = percent

HYPOTHESIS 1b

Some researchers contend that weight gain occurs in early post-maturity and that weight may be lost in late post-maturity. For statistical analysis the sample was divided into two groups by age. There were 64 subjects in the younger group age 55-67 years old and there were 58 subjects in the older group age 68 to 88 years old. It was thus hypothesized that the younger subjects would report tight garments at the waist at a higher rate than older members. This hypothesis was rejected. Results of the analysis show 82 or 67% of the sample reporting fit problems at the waist. Of those reporting fit problems 44 were in the younger group and 38 were in the older group, 54% of the younger group reported tight waist and 50% of the older group reported tight waist.

Change due to weight loss in aging is often ascribed to those in the cohort of old-old, people approximately 75 to 80 years and older. The representation for the old-old age group, 15 subjects, was 11% of the sample and 25% of the old-old group.

HYPOTHESIS 1c

Continuing with the concept of weight gain in earlier post-maturity to weight loss in late post-maturity, it was hypothesized that a higher percent of the younger group would report tight fit overall than would the older group. This hypothesis was

rejected for all sites with tight loose options except upper arm and maximum. Table 2.2, gives the results of the analysis by age.

A higher percentage of younger respondents reported tight fit in the upper arm and maximum thigh; whereas, a higher percent of the older group reported loose fit on these measures. Only a slight difference in the percentage for tight and loose fit was observed between the younger and older group for the remaining fit problem areas with a tight or loose choice. Twenty-five per cent (15) of older subjects were 75 years and over reporting weight loss in recent years is low and these findings cannot be given great significance, but the results demonstrate that for this sample muscle mass of arms and legs is the first to noticeably decrease.

Although these results do not offer conclusive evidence of the population, clothing fit problems reported by this sample indicates a change in clothing fit satisfaction associated with changes in body dimensions and proportions due to aging. There is also an indication that changes the bodies' dimensions and proportions of post-maturity females may reverse (weight gain to weight loss or vis a versa), likely reversing the fit problems when she enters late post-maturity.

TABLE 2.2. Distribution of Reported Tight and Loose Fit Problem by Age Group

Problem Area	Younger			Older		
	*N	% Tight	% Loose	*N	% Tight	% Loose
Neck**	24	8.33	41.67	22	18.18	31.82
Bust**	32	68.75	25.00	19	63.16	21.05
Waist**	44	54.55	15.91	38	50.00	10.53
Abdomen	29	96.55	3.45	26	84.62	15.38
High hip	26	76.92	23.08	15	80.00	20.00
Full hip**	26	76.92	19.23	22	68.18	22.73
Thigh	19	78.95	21.05	8	37.50	62.50
Upper arm	17	100.00	0	9	77.78	22.22
Armhole	14	78.57	21.43	8	75.00	25.00

Notes:
1. (*) N equals the number of subjects indicating fitting problems in their age group for the listed problem areas.
2. (**) Problems areas which had problem causes of "high' and "low" in addition to "tight" and "loose".

PS 42-70 STANDARDS AND SUBJECTS MEASUREMENTS

HYPOTHESIS 2a

Studies of apparel fit for the post-maturity female (Hoffman, Tate & Glissen, 1961; Timiras, 1972; Woodsen & Horridige, 1990) found such physical changes as reduced height, added weight, increased bulk at the hips and waistline, sagging busts and, rounded shoulders. These results suggest that the most apparent changes in the aging body are to the upper body with the exception of the hips. Since the subjects'

body measurements were not available when they were young adults the measurements in the PS 42-70 standard for subject's reported sizes were used for comparisons.

Change is the driving factor in the theory of continuity, for it is adaptation strategies used to compensate for change that is a measure of continuity. Hypotheses in this study apply to measurements or sites on the upper body. Such physical changes as sagging bust lines and rounding shoulders would theoretically lower the apex of the bust line as well as shorten the length of the bust fitting dart. The sizing and fit of blouses would have been ideal for the study, however subjects often reported bust measurement instead of blouse sizes. The size reported for dresses ranged in numerical sizes of 2 to 20. Sizes 12, 14, and 16 in the Misses category were represented in sufficient numbers to analyze. The size distribution results by age category, size category (i.e. junior petite .... half size), and numerical size are given in Table 3.1. Six dress sizes (10, 12, 14, 16, 18 and 20) were selected most often. These six sizes were divided into two groups; small-end sizes 10, 12, and 14; and large-end sizes 16, 18, and 20. The two age groups (younger and older) and the two size groups (small-end and large-end) were correlated, the results show a higher percent of the younger subjects to select sizes from the large-end and a higher percent of the older subjects to select sizes from the small-end (Table 3.2.).

Table 3.1 Samples Reported Dress Size and Category by Frequency and Percent

Dress Category	Dress Size							
	6	**8**	**10**	**12**	**14**	**16**	**18**	**20**
	F %	F %	F %	F %	F %	F %	F %	F %
Junior Petite	2 / 1.65	**	1 / 0.83	**	**	**	**	** / 0.83
Junior	**	**	2 / 1.65	**	**	**	**	**
Misses Petite*	3 / 2.48	3 / 2.48	3 / 2.48	8 / 6.61	6 / 4.96	3 / 3.48	**	**
Misses*	1 / 0.83	**	5 / 4.13	15 / 12.40	15 / 12.40	16 / 13.22	6 / 4.96	4 / 3.31
Tall	**	**	**	**	1 / 0.83	**	**	1 / 0.83
Women*	**	**	**	**	1 / 0.83	2 / 1.65	4 / 3.31	3 / 2.48
Half Sizes*	**	**	**	1 / 0.83	**	3 / 2.48	1 / 0.83	3 / 2.48

NOTES (*) categories with activity in cells for sizes below size 6 and above size 20 with a frequency of no more than 3 per category.

(**) cells with NO activity.

Cells enclosed by double lines used for further analysis

Table 3.2. Dress Size and Category Results

Selected Dress Size by Age Category

Age Category	Large-end (size 16,18,20)		Small-end (size 10,12,14)	
	% size	% age	% size	% age
Younger (age 55-67 yrs.)	58.82	50.0	47.6	50.0
Older (age 68-88 yrs)	41.14	38.9	52.4	61.1

It was hypothesized that there would be a difference in the proportional relationship for height and weight, back waist length and front waist length, shoulder to bust point and back of neck to center front waist, and shoulder length and armscye to waist of the subjects to the same ratios of the PS 42-70 standards. The findings show there to be a significant difference between the ratios of height over weight, back waist length over front waist length, shoulder to bust point over back of neck to center front waist, and shoulder length over armscye to waist as stated in the PS 42-70 for Misses size 12, 14, and 16 and the ratios of subjects wearing size 12, 14 and 16 (Table 3.3.).

TABLE 3.3. Ratios of Selected Body Measurements of the Sample Compared to the SP 42-70 Standards for Size 12

Label	Number	Mean	Std. Dev.	PROB>/T/
Dress Size 12				
Height/weight	15	-0.181	0.142	0.0002
Back waist/ Front waist	15	0.292	0.113	0.0001
Neck to waist/ Neck to bust	15	-0.231	0.185	0.0003
Shoulder length/ Armscye to Waist	15	0.129	0.081	0.0001
Dress Size 14				
Height/weight	15	-0.156	0.120	0.0002
Back waist/ Front waist	15	0.268	0.115	0.0001
Neck to waist/ Neck to bust	15	-0.310	0.303	0.0014
Shoulder length/ Armscye to Waist	15	0.090	0.083	0.0008
Dress Size 16				
Height/weight	16	-0.131	0.190	0.0142
Back waist/ Front waist	16	0.313	0.183	0.0001
Neck to waist/ Neck to bust	16	-0.229	0.122	0.0001
Shoulder length/ Armscye to waist	16	0.068	0.091	0.0098

Note: The amount with minus (-) is the sample's ratio below the SP 42-70 standards ratio and that with no sign are above the standard.

HYPOTHESIS 2b

It was hypothesized that there would be differences in selected upper body measurements of the subjects and corresponding measures in the PS 42-70 standard. A correlation of the means for 17 upper body measurements and height and weight produced a significant difference for 13 body measurements in the size 12 group, 12 for the size 14 group, and 10 for size 16 with a >\T\ range of 0.0001 (<p .001) to 0.0241 (<p .05). The results are given in Tables 3.4 through Table 3.6.

These results provide evidence that the subjects' measurements fail to correspond with proportions and dimensions of upper body garments that are sized according to the PS 42-70 standards. The standard does not calibrate to the measurement needs of the subjects in this study. Thus, there are physically measurable reasons for their dissatisfaction with apparel fit.

Table 3.4. T-test Results Comparing Sample's Upper Body Measurements with SP 42-70 Standard Measurements for Size 12

Variable	Mean	SP 42-70	Min	Max	SD	>\T\
Girths:						
Mid Neck	34.3	35.6	32.0	37.5	1.5	.0063
Full Bust	93.0	88.9	75.5	107.0	7.7	.0566
Waist	80.7	66.0	67.0	103.0	8.3	.0001
Arcs:						
Cross Chest Width	33.6	31.4	31.0	37.5	2.2	.0015
Bust Front	49.3	51.6	37.5	58.5	6.0	.1951
Bustpoint to Bustpoint	19.9	19.0	16.0	22.0	1.8	.0740
Waist Front	44.4	35.6	34.5	56.0	5.2	.0001
Cross Back Width	37.7	32.7	33.5	42.0	2.1	.0001
Lengths:						
Height	162.0	162.0	152.0	169.0	4.6	.6231
Cervical to Floor	143.0	139.7	135.0	150.5	5.0	.0241
Waist to Floor	101.4	101.3	94.0	107.0	4.2	.9390
Front Waist Length	35.5	34.3	29.5	40.5	3.6	.0219
Back waist Length	40.9	39.4	38.0	43.5	1.5	.0015
Shoulder to Bustpoint	28.9	23.8	26.0	33.0	1.9	.0001
Armscye to Waist	19.6	21.3	17.0	21.5	1.6	.0013
Shoulder Length	13.4	11.1	11.0	15.0	1.2	.0001
Vertical Trunk Total	152.9	152.4	142.5	160.5	5.4	.7081
Shoulder Slope/Degrees	20'	23'	10'	25'	4.4	.0161
Weight/Pounds	146.9	125	125	179	18.8	.0005

Table 3.5. T-test Results Comparing Sample's Upper Body Measurements with SP 42-70 Standard Measurements for Size 14

Variable	Mean	SP 42-70	Min	Max	SD	>\T\
Girths:						
Mid Neck	35.3	36.5	34.0	38.0	1.0	.0005
Full Bust	98.7	92.7	91.0	150.0	3.7	.0001
Waist	85.5	69.8	79.0	90.5	3.5	.0001
Arcs:						
Cross Chest Width	34.8	32.1	31.0	40.0	2.3	.0004
Bust Front	54.1	54.0	48.5	58.0	3.0	.9052
Bustpoint to Bustpoint	20.2	19.7	18.5	22.0	1.0	.0780
Waist Front	45.9	37.8	40.0	50.0	3.0	.0001
Cross Back Width	39.6	33.7	38.0	42.5	1.5	.0001
Lengths:						
Height	163.8	163.8	157.0	170.0	3.7	.9972
Cervical to Floor	144.1	141.0	139.5	151.0	3.7	.0048
Waist to Floor	103.5	102.0	97.5	109.0	3.0	.1082
Front Waist Length	35.9	35.0	29.0	41.5	3.6	.3273
Back waist Length	40.6	40.0	34.5	44.0	2.2	.3206
Shoulder to Bustpoint	31.2	24.8	26.5	52.5	6.1	.0012
Armscye to Waist	19.5	21.6	14.5	23.0	2.6	.0066
Shoulder Length	13.3	11.3	12.0	15.0	.921	.0001
Vertical Trunk Total	158.0	156.2	151.5	166.0	3.9	.1047
Shoulder Slope/Degrees	19′	23′	10′	25′	5.3	.0177
Weight/Pounds	158.2	136	130	186	18.0	.0003

Table 3.6. T-test Results Comparing Sample's Upper Body Measurements with SP 42-70 Standard Measurements for Size 16

Variable	Mean	SP 42-70	Min	Max	SD	>\T\
Girths:						
Mid Neck	35.9	37.5	32.0	38.5	1.7	.0021
Full Bust	101.2	96.5	91.0	108.5	4.7	.0011
Waist	86.3	73.6				
Arcs:						
Cross Chest Width	35.2	32.6	31.0	38.0	2.0	.0001
Bust Front	55.7	56.5	47.0	66.5	4.5	.4760
Bustpoint to Bustpoint	21.1	20.3	19.0	23.0	1.0	.0092
Waist Front	50.8	40.0	44.0	57.5	3.7	.0001
Cross Back Width	39.6	34.6	36.5	44.0	2.1	.0001
Lengths:						
Height	164.1	165.0	153.0	176.0	6.1	.5205
Cervical to Floor	146.3	142.2	137.0	167.0	8.1	.0620
Waist to Floor	103.7	103.2	96.0	111.0	4.7	.6945
Front Waist Length	36.3	35.6	28.0	45.0	4.5	.5005
Back waist Length	42.7	40.6	37.5	59.5	5.2	.1376
Shoulder to Bustpoint	30.7	25.7	25.5	34.0	2.1	.0001
Armscye to Waist	19.2	22.0	14.0	24.0	3.0	.0028
Shoulder Length	13.1	11.4	10.5	16.0	1.6	.0009
Vertical Trunk Total	160.4	160.0	143.0	179.0	8.9	.8529
Shoulder Slope/Degrees	22'	23'	15'	30'	4.9	.3727
Weight/Pounds	171.1	147	115	250	32.8	.0102

CLOTHING INTEREST

HYPOTHESIS 3

Clothing interest has been addressed previously as it relates to economic and other social interactions by post-maturity individuals. Earlier examinations referenced subjects' levels of clothing interest at the time of the study; and when the results indicated low clothing interest it was concluded that clothing interest declines with advancing age. The contention of this study is that post-maturity females maintain continuity of clothing interest. Although a woman may be dissatisfied with the availability of apparel that meets her needs; there is continuity in her level of clothing interest exhibited through her behaviors to satisfy her clothing needs.

For this study continuity of clothing interest is based on current clothing interest and recalled interest from respondents' forties and twenties. Hypotheses were formulated to detect changes in respondents' clothing interest. Was there a change in clothing interest, and if so was there an increase or decrease? Clothing interest is exhibited in behaviors involving the acquisition, care, and the use of clothing as it relates to self and others.

It was hypothesized that the level of the subjects' clothing interest would not differ from the subjects' recalled clothing interest when they were in their twenties or forties. Means for clothing interest, for current and recall, were not significantly different when tested with a T-test and a Duncan's Multiple Range Test (MRT). The results are shown in Table 4.1. and Table 4.2.

TABLE 4.1. T-Test Results for Clothing Interest by Age Group Across Age Periods

Age Group	N	Mean	Std Dev	DF	Prob>/T
		Current Interest			
Younger (55-67 yrs)	64	10.69	2.95	118	0.82
Older (68-88 yrs.)	56	10.57	2.60	118	0.82
		Interests in Twenties			
Younger	63	3.46	1.28	119	0.17
Older	58	3.78	1.15	119	0.16
		Interests in Forties			
Younger	64	3.48	1.23	120	0.15
Older	58	3.79	1.12	120	0.15

TABLE 4.2. Clothing Interest Levels.

	Clothing Interest		
Age Period	Forties	Twenties	Current
Mean	1.21	1.20	1.18
	N = 122	N = 121	N = 120

NOTE any group underlined by the same line is not significantly different.

Respondents who were interested in shopping for clothing, reading fashion magazines, sewing their own clothing, etc., were interested in their twenties, their forties, and still are interested. Those not interested are still not interested. Respondents were given the opportunity to make comments addressed to the clothing industry regarding their needs and interests. Eighteen subjects made comments pertaining to design and styles   available to post-maturity females. From a 68 year old subject "I sew because I can't find styles I like"; a 75 year old "I can't find colors I like"; a 74 year old "most styles are too frilly and youthful"; a 76 year old "give more consideration for styles that are appropriate for women over age 55"; a 69 year old "clothing styled for my age group makes me feel dowdy, I would like brighter colors" . Other comments called for a need for "larger petite sizes", "better selection with long and three-quarter sleeves", "better selection in larger sizes ---- in tall sizes"

Looking more closely at the mean, the current clothing interest by age group (younger and older) the standard deviation is greater by 0.35 for the younger group than the older group. The standard deviation for recalled clothing interest for age periods of twenties and forties by age group shows the younger group to have a slightly higher variance of 0.13 and 0.11 respectfully than the older group.

For this sample there is evidence of continuity of clothing interest across their adult life span. This deduction is based on the insignificant difference in the respondents' current clothing interest scores and the recalled clothing interest scores.

ANALYSIS OF LEISURE ACTIVITIES

HYPOTHESIS 4a

Individuals in the post-maturity stage of life are either in or approaching retirement. With retirement, many people take the opportunity to do things they have always wanted to do. These anticipated life changes often fall into the sphere of leisure activities which result in an increased or decreased interaction with others. According to Covey (1981) "people with well defined patterns of life style.... are more likely to carry these activities, roles, and patterns into old age (p.629)". It was hypothesized that there would be no difference in participation in group leisure activities and individual leisure activities as reported by the subjects in their twenties, forties, and sixties. The age category of sixties is included to reduce the span of time for recalled leisure activities for the subjects who were age seventy-five years and older. Only 15 of the 122 subjects were in the seventy-five years and older group. The results are given in Table 5.1.and Table 5.2.

TABLE 5.1. Duncan's Multiple Range for the Main Effect at Three Age Periods for the Sample's Leisure Activity in Group Social Settings

	Leisure Activities Group Social Settings		
Age	Twenties	Sixties	Forties
Mean	18.83	17.93	17.18
	N = 121	N = 15	N = 122

NOTE any group underlined by the same line is not significantly different.

TABLE 5.2. Duncan's Multiple Range for the Main Effect at Three Age Periods for the Sample's Leisure Activity in Solo Social Settings

	Leisure Activities Solo Social Settings		
Age	Sixties	Twenties	Forties
Mean	20.80	19.97	18.67
	N = 15	N = 123	N = 123

NOTE any group underlined by the same line is not significantly different.

Table 5.3. Paired T-Test of Individual to Group Leisure Activities

Variable	Mean	Std error	T	Prob>{T}
Within the sample				
Difference 20's	0.87	0.26	3.39	0.0009
Difference 40's	2.21	0.29	7.50	0.0001
Difference 60's for subjects 75+	0.14	0.74	0.19	0.8499
Younger Age Category (55-67)				
Difference 20's	1.06	0.34	3.09	0.0030
Difference 40's	2.14	0.40	5.35	0.0001
Difference 60's for subjects 75+				
Older Age Category (68-88)				
Difference 20's	0.65	0.38	1.69	0.0966
Difference 40's	2.30	0.44	5.22	0.0001
Difference 60's for subjects 75+	0.14	0.74	0.19	0.499

A Duncan's (MRT) of the individual leisure activities and the group leisure activities show there to be a significant difference across the sample for the subjects in their twenties (>t 0.0009) and forties (>t 0.0001). Results for subjects in the over 75 years were insignificant for the difference when they were in their sixties (>t 0.8499). When the sample is grouped into younger and older age groups there is a difference for both age groups for when they were in their forties (>t 0.0001). The difference for

the younger group when they were in their twenties (>t 0.0030) was significant but to a lesser degree. The older group did not have a significant difference for either their twenties (>t 0.0966) or their sixties (>t 0.499).

HYPOTHESIS 4b

After retirement, adjusting to a more leisure role may include developing a new identity and/or establishing a sense of belonging. Developing new relationships or interests in activities with persons outside the daily family/friend circle has implications for aiding healthy and happy aging (Palmore, 1979).

It was hypothesized that there would be an increase in the frequency of current leisure activities in comparison with recalled leisure activities at sixties, forties, and twenties. The results of a Duncan's (MRT) is shown in Table 5.3. The results show there to be a difference for the sample's mean score for their recalled frequency of leisure activities in their twenties (38.17) and sixties (42.27). The means for their twenties and sixties were not significantly different from the mean (40.95) for their forties.

TABLE 5.4. Duncan's Multiple Range for the Main Effect at Three Age Periods for the Sample's Frequency of Leisure Activity.

Leisure Activities
Frequency

Age	Sixties	Forties	Twenties
Mean	42.27	40.95	38.17
	N = 15	N = 121	N = 122

NOTE any group underlined by the same line is not significantly different.

The results of hypothesis 4a and 4b could be due to the fact that the younger group has a more vivid recall of their earlier leisure activities since the time lapse is less. There is also the possibility that for both groups the indulgence in leisure activities was more acceptable and accessible when they were in their forties.

INTERRELATIONSHIP OF APPAREL FIT SATISFACTION WITH

CLOTHING INTEREST AND WITH LEISURE ACTIVITIES

HYPOTHESIS 5a

Apparel fit satisfaction is hard to define because it is a multi-faceted concept. Apparel fit satisfaction may be sought on aesthetic, social, psychological, and/or

physical levels. It can be approached from a perceptual or a precisely measurable direction.

The rational for the hypotheses that follow were derived from two areas of research. First, Gurel's (1974) inclusion of the desire for comfort and fit as part of the personality pattern of a person manifesting high clothing interest. Second, the contention of Miller, Davis, and Rowold (1982) that clothing is often used as a means of gaining social approval and can express conformity or individuality in the presentation of self.

It was hypothesized that an association would be found between clothing interest and satisfaction with apparel fit. Results Table 6 confirm hypothesis 5a. A Paired T-test of current clothing interest and satisfaction with clothing fit yielded a T-probability of 0.91 for both satisfaction and dissatisfaction with apparel fit. The standard deviation (SD) was 3.14 for satisfaction with apparel fit and 2.54 for dissatisfaction with apparel fit.

HYPOTHESIS 5b

It was hypothesized that there will an association between frequency of leisure activity and satisfaction with apparel fit. A Paired T-test of current leisure activity, based on frequency, and satisfaction with apparel fit yielded a T-probability of 0.68 for satisfaction with apparel fit and 0.69 for dissatisfaction with apparel fit. The SD was 4.90 for satisfaction with apparel fit and 3.85 for dissatisfaction with apparel fit.

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HYPOTHESIS 5c

It was hypothesized that an association between the setting of current leisure activity and satisfaction with apparel fit would be found. A Paired T-test of individual leisure activities with satisfaction with apparel fit and group leisure activities yielded the following. The T-probability was 0.83 for both satisfaction and dissatisfaction

TABLE 6. RESULTS T-TESTS OF SATISFACTION OF CLOTHING FIT AND LEISURE ACTIVITIES

CURRENT CLOTHING INTEREST

Clothing Fit Satisfaction	N	Mean	STD DEV	DF	Prob>\T\
YES	51	10.66	3.14	118	0.9138
NO	69	10.60	2.54	94.1	0.9110

F' = 1.52   DF = (50,68) Prob>F' = O.O639

Current Leisure Activities

	N	Mean	STD DEV	DF	Prob>\T\
YES	54	41.3	4.90	117	0.6888
NO	65	41.6	3.85	99.5	0.6954

F' = 1.62   DF = (53,64)   Prob>F' = 0.0639

Current Individual Leisure Avtivities

	N	Mean	STD DEV	DF	Prob>\T\
YES	54	20.8	2.81	120	0.8311
NO	68	20.9	2.58	108.9	0.8328

F'= 1.19   DF = (53,67)   Prob>F' = 0.4954

Current Group Leisure Activities

	N	Mean	STD DEV	DF	Prob>\T\
YES	54	18.8	3.39	118	0.8034
NO	66	18.9	2.36	91.6	0.8102

F' = 2.07 DF = (53,65)   Prob>F' = 0.0055

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with apparel fit for individual leisure activities with a SD of 2.81 for satisfaction and 2.58 for dissatisfaction. The results for group leisure activities was, T-probability of 0.80 for satisfaction with apparel fit and 0.81 for dissatisfaction with SD of 3.39 for satisfaction with apparel fit and 2.36 for dissatisfaction.

The paired variables for hypotheses 5a, b, and c show there not to be a relationship between clothing interest, frequency of leisure activity, or current leisure activity and satisfaction with apparel fit.

CHAPTER VI

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Previous research involving the post-maturity female and clothing has given attention to social, psychological, and physical states manifested by subjects at the time of the research. The states manifested at different phases of a life cycle are achieved as a composite of past experience. Therefore, this research was initiated to determine the continuity of selected social, psychological, and physical variables and satisfaction with apparel fit for women age 55 years and older. In this chapter the findings are summarized, conclusions stated, and recommendations made for further research.

SUMMARY

This study of clothing interest, leisure activity, and clothing fit satisfaction was part of a national anthropometric study by the ASTM D-13 committee on textiles. The sample consisted of 123 ambulatory women age 55 years and older residing in south-east and south-west Virginia.

The sample consisted of 78% Caucasian and 22% Black. The majority of the subjects reported they were high school graduates and were employed with an annual family income of $10,000 to $30,000.

Hypothesis 1a, which stated that fit problems would be reported for the neck, shoulder, bust, and waist more often than other areas of the body, was rejected. Only one of four body sites, the waist, was reported as a fit problem by a significant percentage (67%) of the sample. The percentage of the sample reporting fit problems at the neck, shoulder, and bust was less than 50% for each site. Hypothesis 1b stated that the younger subjects of the sample would report garments being tight at the waist at a higher rate than the older members. The results for hypothesis 1b showed the reported tight waist fit for the younger age group to exceed the older age group by only a 4% margin. Hypothesis 1c stated that a higher percent of the younger group would report tight fit overall than would the older group. Hypothesis 1c was accepted for two sites, the upper arm and the maximum thigh, and was rejected for the remaining seven problem sites.

Hypothesis 2a stated that there would be a difference between the proportional relationship for: the sample and PS 42-70 standard in height and weight, back waist length and front waist length, shoulder to bust point and back of neck to center front waist, and shoulder length and armscye to waist. Hypothesis 2a was accepted and was statistically significant at .001 to .01 for the comparison of the mean ratios of height over weight, back waist length over front waist length, shoulder to bust point over back of neck to center front waist, and shoulder length over armscye to waist. Hypothesis 2b stated that there would be differences in selected upper body measurements of the subjects and corresponding measures in the PS 42-70 standard.

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Hypothesis 2b was accepted for 13 of 17 sites for size 12, 12 of size 14, and 10 of size 16.

Hypothesis 3 stated that the level of the subjects' clothing interest would not differ from the subjects' recalled clothing interest when they were in their twenties or forties. The hypothesis was accepted. There were no differences between current clothing interest levels and recalled clothing interest levels for subjects at ages spanning decades in their twenties and forties.

Hypothesis 4a stated that there would be no difference in participation in group leisure activities and individual leisure activities as reported by the subjects in their twenties, forties, and sixties. Hypothesis 4a compares the difference in solo to group activities at the age periods of twenties, forties, and sixties. A Duncan's (MRT) of the solo leisure activities and the group leisure activities show there to be a significant difference across the sample for the subjects in their twenties and forties. The subjects in the over 75 age group results were insignificant for the difference when they were in their sixties. Hypothesis 4a is accepted for the subjects under the age of 75 years and for those 75 years and over except for when they reach their sixties. Hypothesis 4b stated that there would be an increase in the frequency of current leisure activities in comparison with recalled leisure activities at sixties, forties, and twenties. The results show there to be a difference across the sample in their mean score for when they were in their twenties and sixties. The means for both age periods were not significantly different from the mean for their forties.

Hypothesis 5a stated that an association would be found between clothing interest and satisfaction with apparel fit. Results show no association. Hypothesis 5b stated that there will be an association between frequency of leisure activity and satisfaction with apparel fit. Results show no association.

Hypothesis 5c stated that an association between the setting of current leisure activity and satisfaction with apparel fit would be found. Results show no association.

CONCLUSIONS

A brief review of the findings reveal a difference in the PS 42-70 standard upper body measurements and the corresponding measurements of women age 55 years and over. For example the women found it more difficult to find ready-to-wear fitted dresses in which the waist is not too high or too low rather than for too tight. There is a need for designers and apparel manufacturers with an interest in the patronage of this clientele to investigate and understand the changes of the post-maturity female body.

The difference between the standard and the women's measurements give even more weight to their reported fit problems. Since alterations are an added cost when purchasing apparel, and the older of this cohort are generally on a fixed income, now is the time to develop sizing and grading guidelines that incorporates the body type of the post-maturity female.

Moreover the post-maturity female as a consumer is often approached with stereotypes rather than a knowledge of their needs and behavior. The post-maturity female is as active if not more active than when she was a young or middle aged adult. Active individuals desire comfort in their clothing. Active individuals prefer to enjoy the activity they are involved in rather than to be distracted by making adjustments to their clothing.

The women all showed an active interest in clothing even the older members of the sample. A concern that little attention is given to the lack of variety in style, color, and fabric design was voiced. The findings here serve as evidence that there is continuity or little change in levels of leisure activity or clothing interest for women in the post-maturity phase from when they were young adults.

RECOMMENDATIONS

The following are areas of further investigation based on the questions the findings raise:

1. A study to investigate how appropriately clothing instruments address the post-maturity adult.

2. An investigation of the applicability of established grading increments to how the post-maturity body grows.

3. Identify the standard body for the post maturity female.

4. An investigation of the anthropometric variation in the post-maturity female body between races.

5. Investigate the body types within the post-maturity cohort and determine their grading needs.

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APPENDIX A

Informed Consent Form

INFORMED CONSENT FORM
Sizing system for elderly women:
ages 55 and over

Principal Investigator: Earline Rainer Jeanes

The process of aging in humans produces many natural changes in both internal and external structures. The ability of an individual to adjust to these natural changes affects the quality of life in later years. Clothing that meet the needs of fit and comfort for the aging female body eliminates one aspect of environmental adjustment. Clothing is a contributing factor in the social interaction of elderly females. The purpose of this research is to determine the relationship between clothing and leisure activity for elderly women. The study is in cooperation with a national study by the ASTM DM-13 committee in cooperation with the Cooperative Extension, which is studying the difference between the standard measurements used by the women's apparel industry and the measurements of elderly women.

The subjects will be selected on the basis of age. All subjects will be female, age 55 years and older, ambulatory, and physically able to go to the data collection site and to stand for 25 to 30 minutes. The subjects will be measured at 57 body sites including height and weight. These measurements will be taken over an Ultra Fit body suit worn over normal undergarments. All of the measurements relate to the dimensions and proportions of clothing. The subjects will be interviewed on items pertaining to clothing interest, fit problems, and acquisition, and past and present leisure participation. The questionnaire includes 3 demographic questions of age race and income level.

Subjects will not be identified individually at any time. Only group data will be used for publication and presentations based on this study.

The entire process will take approximately 45 min. Participation is voluntary and subjects may withdraw consent and terminate the procedure at any time.

Any inquiries concerning the project will be answered by Earline Rainer Jeanes or Vera B. Keeble.

_____
Participant, signature & date

_____
P. I., signature and date

APPENDIX B

ULTRA FIT Size Chart

ULTRA FIT Size Chart

LEOTARD & TIGHTS

SIZES	X-SMALL	SMALL	MEDIUM	LARGE	X-LARGE	XX-LARGE	XXX-LARGE
FITS: SIZES	2-4	5-8	9-11	12-16	(misses) 18-24 (women) 38-40	40-46	48-52
BUST	30-32"	31-34"	33-36"	35-38"	39-46"	44-50"	51-56"
HIP	31-34"	33-35"	35-38"	36-40"	41-47"	46-54"	54-60"
BACK: NECK TO WAIST LENGTH	13½-14"	14½-15"	15-15½"	15½-16¼"	16½-16¾"	16½-17"	16¾-17½"
INSEAM LENGTH (CROTCH TO ANKLE)	23-25"	25-27"	27-29"	29-31"	31-33"	33-35"	33-35"
WEIGHT POUNDS	80-100	90-130	130-150	140-165	150-180	175-200	225-275
HEIGHT	Fabric elongates to fit various heights						

Heavier legs may require one size larger

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APPENDIX C

Instsuction for Taking Body Measurements

STANDING GIRTH AND ARC MEASUREMENTS

1. **Middle of Neck** (at the center of a shirt collar band). This is one of the few instances when we will **not** measure the center yellow line of the tape, but will measure the neck itself.

2. **Neck, Base**

    (button type collar location). Let the bottom of the tape (metric edge) lay on the yellow line of tape. Make sure the neck tape rides over the cervical bone at base of neck in back. Subject may need to help hold measure on left side of neck base.

3. **Bust, High** (across chest and back close to the underarm). This measurement will **not** be parallel to floor, but will go under the arm and across upper chest. Be careful that measuring tape does not ride down in back.

4.   <u>Bust, Full.</u>   Measure across the high
     point.   The tape should be parallel to
     the floor.   Make sure the tape measure
     does not fall down at center back.

4a. <u>Chest, underbust</u>.   THIS IS NOT SHOWN ON
     VIDEO.   Measure across the diaphragm rib
     cage directly under the bust, making sure
     tape does not fall down at center back;
     hold extra snug, taunt against the rib
     cage.

5.   <u>Waist</u>.   Remind subject to relax and
     breathe naturally.   Inhaling will tend to
     cause a smaller than normal waist measure
     reading.   The tape measure may not be
     parallel to the floor, especially if the
     subject has one high hip.
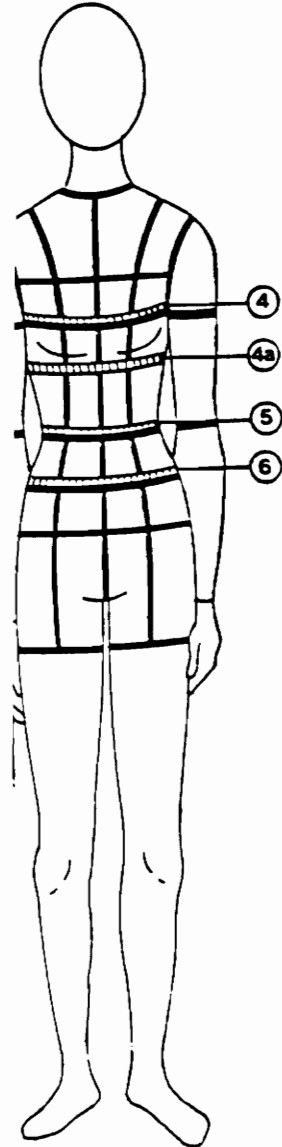
17. **Bust Front, Standing.** Before taking these "arc" measurements, recheck body suit right side seam tape location. It should be perpendicular to waist and not pulled toward front or back. Measure from left vertical side seam tape to the right vertical side seam tape. This is a front bust arc measure.

18. **Waist Front, Standing.** Measure from left vertical side seam tape to right vertical side seam tape. This is a front waist arc measure.

19. **Abdominal Front, Standing.** Measure at high hip from side to side at location of abdominal extension tape. This a front high hip arc measure.
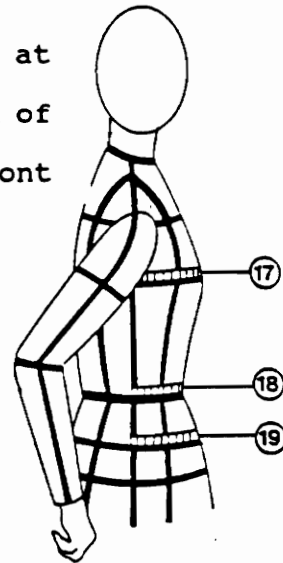
VERTICAL MEASUREMENTS

21. <u>Vertical Trunk, Front</u>. Measure from the front <u>mid shoulder point</u>(*) to inseam (video incorrectly measured <u>from neck base</u>). Mark tape with your finger at crotch inseam intersection and read it after tape is removed for the front measure.
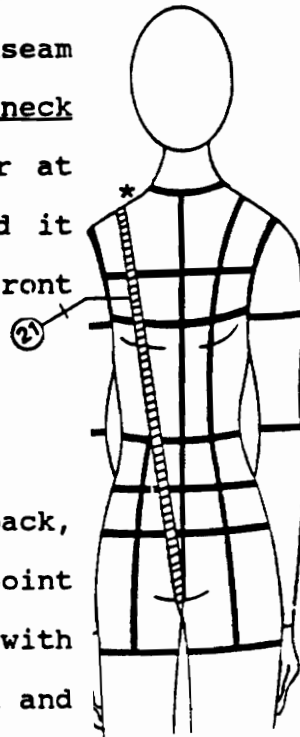
22. <u>Vertical Trunk, Back</u>. In the back, measure from the same mid shoulder point (*) to back inseam. Mark tape with finger at crotch inseam intersection and read it after tape is removed, for the back measure.
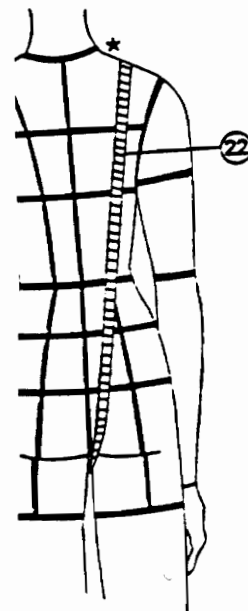
23. <u>Vertical Trunk, Total</u>. NOT SHOWN ON THE VIDEO, only explained. The measuring tape is not long enough to measure the total trunk at one time. Therefore, add measurements #21- vertical trunk front and #22- vertical trunk back to obtain the total trunk measure. Record total as entry #23.

```
          #21
     +    #22
     =    #23
```

24. **Waist Length, (Back)**.   Measure from
    cervical bone at base of back neck to
    natural waist in back.

25. **Waist Height, (Back)**. Measure from waist
    to floor.

26. **Cervical Height**.   NOT SHOWN ON VIDEO,
    only explained. Since one cannot reach
    from cervical bone to floor it is
    necessary to add # 24- waist length and
    #25- waist height to obtain the total
    cervical height.
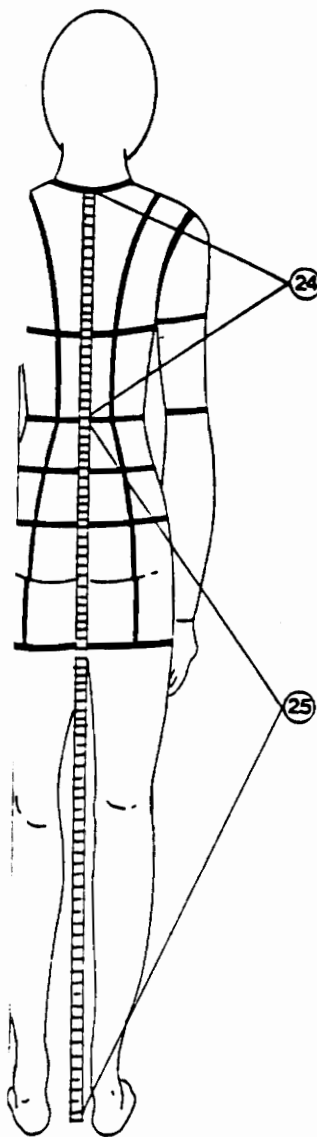
$$
\begin{array}{rl}
 & \#24 \\
+ & \underline{\#25} \\
= & \#26
\end{array}
$$

WIDTH AND LENGTH MEASUREMENTS

34. **Front Cross Chest Width**. Measure from
     armscye to armscye across chest tape (in
     notch area of commercial pattern
     armhole).
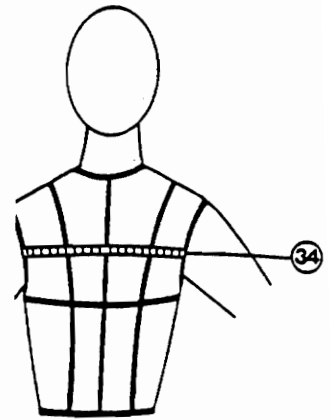
35. **Bustpoint to Bustpoint**. Measure on tape
     from apex of each bust cup curve.
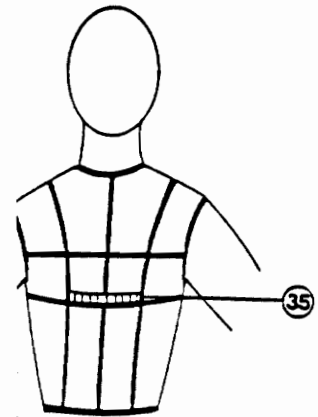
36. **Neck to Bustpoint**. Measure from the
     intersection of the neck/shoulder down to
     the bustpoint.
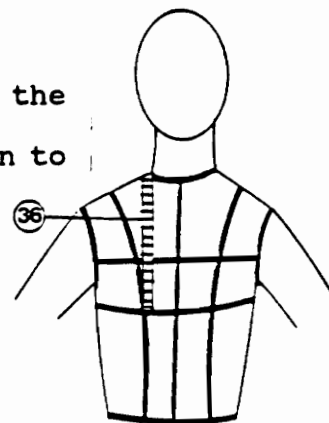
37. Cervical to Centerfront, Waist. Measure begins at cervical bone at back neck base and follows around the neck toward front and down to centerfront waist.
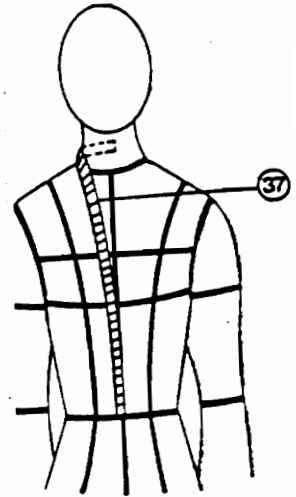
38. Waist Length Front. Measure from center front neck to center front waist.
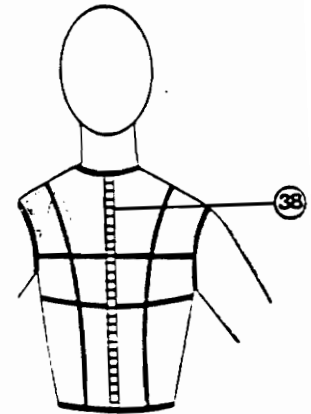
39. Cross-Back Blade Width. Measure from left back arm breakpoint to right back breakpoint (at crease of arm and back, not the underarm seam). Check accuracy of measurement since there is no tape on the body suit at this location to guide you.
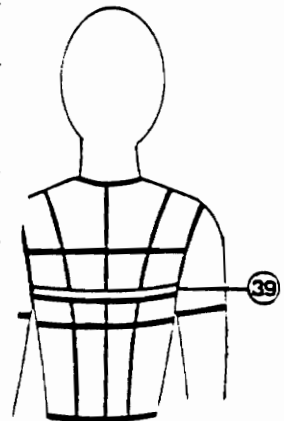
40. **Cross-Back Shoulder Width.**

   Measure from the intersection of the
   armhole and shoulder across high upper
   back area (from * to *). Again, there is
   no tape on the body suit to guide you.
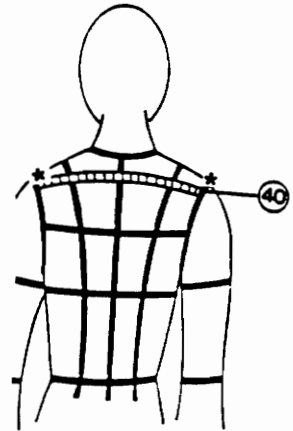
41. **Armscye Depth-Arm.** Measure straight down
   the back from the shoulder/armscye
   intersection to a point level with the
   base of the armscye. Determine this
   point (armscye depth) by placing a
   finger(s) or pencil high into the
   underarm perpendicular to the underarm
   seam.
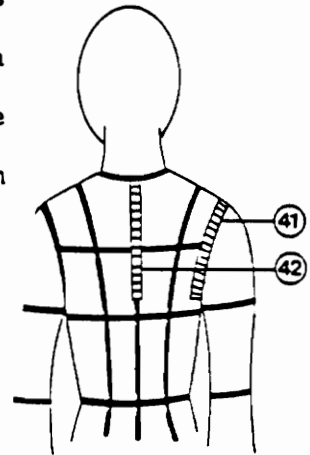
42. **Armscye Depth--Center Back.**

   A pin was earlier placed on the
   center back tape for use with this
   measurement. Measure from cervical
   to the depth of armscye marked at
   center back.

43. **Armscye to Waist**.   Measure from the underarm to waist.   This will be from armscye tape intersection to natural waistline.   Lift the arm to place tape and then _drop_ the arm to measure.

44. **Shoulder Length**.   Measure from base of neck out to the armscye-shoulder intersection.
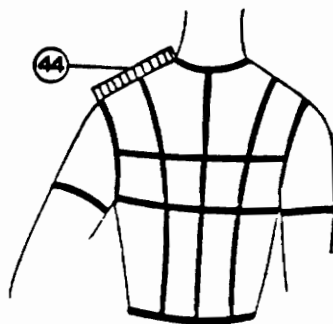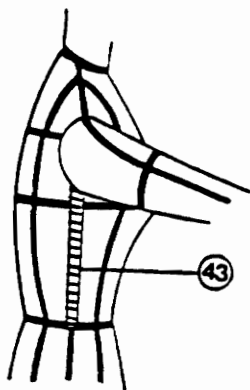
53.   Sitting Spread, Seated.   Before subject
      sits   down   locate   tape   at   full   hip.
      Loosely hold tape at hip so it can expand
      in place and have subject sit down.   Tape
      will spread and when subject is seated
      read the measurement.   Check position of
      model before reading the measurement.
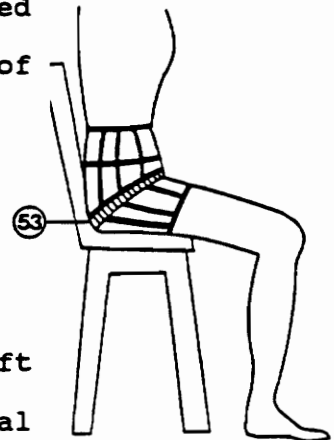
54.   Waist Front, Seated.   Measure from left
      vertical side seam tape to right vertical
      side seam tape.   This is a front waist
      arc measure.

55.   Abdominal Front, Seated.   Measure from
      left vertical side seam tape to right
      vertical side seam tape at the position
      of the abdominal extension tape. This is
      a front abdominal arc measure.
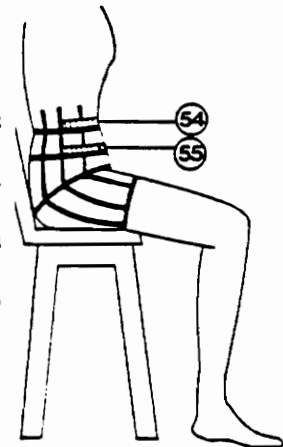
56. <u>Stature, Total Height</u>. Have subject stand with back next to wall against mounted long tape measure with metric side showing. Lay a stiff ruler flat on top of subject's head, at a right angle to wall; have individual inhale and read height measure from mounted tape.

57. <u>Weight, Approximate</u>. Using a standard scale read and record the weight in pounds.

APPENDIX D

Copy of National Instrument
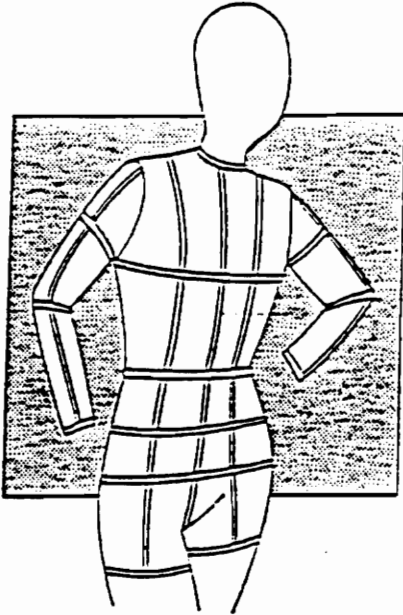
Subject Code: _VA1505_

MEASUREMENT DATA

AND

INTERVIEW QUESTIONNAIRE

State/Regional Coordinator _____

Data Collection Assistant: _____
                                                    ‾‾‾‾‾‾
                                                    Code #

Location of Training:_____

**TO ENSURE ACCURATE AND RELIABLE DATA
DO NOT PROCEED BEFORE REVIEWING BOTH
THE TRAINING VIDEO AND THE MANUAL**

MEASUREMENT DATA

STANDING GIRTH AND ARC MEASUREMENTS (centimeters)

_____ 1. Middle of Neck (center of a collar band)

_____ 2. Neck, Base (button-type collar location)

_____ 3. Bust, High (across chest, close to underarm)

_____ 4. Bust, Full

_____ 4a. Chest, Underbust (NOT ON VIDEO)

_____ 5. Waist

_____ 6. Abdominal Extension, High Hip Level-marked @ side with pins

_____ 7. Hips, Full

_____ 8. Thigh, Maximum

_____ 9. Thigh, Mid   (10)

_____ 10. Knee, Kneecap

_____ 11. Calf

_____ 12. Ankle

_____ 13. Armscye

_____ 14. Upper Arm (level of armpit, arm down)

_____ 15. Elbow (over bone with arm bent)

_____ 16. Wrist

_____ 17. Bust, Front -- Standing

_____ 18. Waist, Front -- Standing

_____ 19. Abdominal, Front -- Standing   (20)

_____ 20. Hip, Back -- Standing

VERTICAL MEASUREMENTS (centimeters)

_____ 21. Vertical Trunk, Front (shoulder to front inseam)

+ _____ 22. Vertical Trunk, Back (inseam to back shoulder)

= _____ 23. Vertical Trunk, Total (shoulder/inseam/shoulder) (NOT ON VIDEO)

_____ 24. Waist Length, Back (cervical to waist)

+_____ 25. Waist Height, Back (to floor)

=_____ 26. Cervical Height -- add #24 and #25 (NOT ON VIDEO)

_____ 27. Waist to Abdominal Extension Height (high hip)

_____ 28. Waist to Full Hip

_____ 29. Abdominal Extension Height (at side hip to floor) (30)

_____ 30. Hip Height (at side seam to floor)

_____ 31. Crotch Height (inseam to floor)

_____ 32. Knee Height (from crease at back of knee to floor)

_____ 33. Ankle Height (to floor)

WIDTH AND LENGTH MEASUREMENTS (centimeters)

_____ 34. Cross-Chest Width (from arm breakpoint to breakpoint)

_____ 35. Bustpoint to Bustpoint

_____ 36. Neck to Bustpoint (from neck/shoulder)

_____ 37. Cervical to Centerfront Waist (from back neck to CF waist)

_____ 38. Waist Length, Front (from CF neck to CF waist)

_____ 39. Cross-Back Blade Width (arm breakpoint to breakpoint) (40)

_____ 40. Cross-Back Shoulder Width(from shoulder/armscye to armscye)

_____ 41. Armscye Depth Arm (back shoulder/armscye to armscye base)

_____ 42. Armscye Depth Center Back (CB neck to level of AS base)

_____ 43. Armscye to Waist (at underarm)

_____ 44. Shoulder Length (neck base to shoulder/armscye)

_____ 45. Arm Length, Shoulder to Elbow (arm slightly bent)

_____ 46. Arm Length, Shoulder to Wrist (arm slightly bent)

_____ 47. Underarm Length (with arm straight)

_____ 48. Crotch Length, Total (front waist/inseam/back waist)

-_____ 49. Crotch Length, Front (front waist/inseam) (50)

=_____ 50. Crotch Length, Back (inseam/back waist) (NOT ON VIDEO)
                     (Subtract # 49 from # 48)

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_____ 51. Front Crotch Depth (using right angle measure)

_____ 52. Shoulder Slope (degrees -- ~~left~~ right side)

GIRTH AND ARC, SEATED MEASUREMENTS

_____ 53. Sitting Spread, Seated (taken over hip)

_____ 54. Waist, Front, Seated (arc measurement)

_____ 55. Abdominal, Front, Seated (arc measurement)

HEIGHT AND WEIGHT

_____ 56. Stature (total height) (NOT ON VIDEO)

_____ 57. Weight, in pounds) (NOT ON VIDEO)

AGE, ETHNICITY, AND INCOME

A.   How old are you?   (59) [1]

[ ] 55-60 [ ] 65-69 [ ] 75 and older

[ ] 61-64 [ ] 70-74

B.   Are you   [ ] Black [ ] Caucasian [ ] Hispanic   (60) [2]

[ ] Native [ ] Oriental   [ ] Other_____
American

C.   What is your income level: (61) [3]

[ ] Under $10,000   [ ] $10,001-$20,000

[ ] $20,001-$30,000   [ ] Over $30,000

Q1.   Which of the following is your most frequent source of clothing?

(circle one)   (62) [4]

1. Department store (e.g., Dillards, Macy, Sears, Pennys)

2. Boutique/specialty(e.g., Saks Fifth Avenue, Lerners)

3. Discount store   (e.g., K-Mart, Target)

4. Off-price store   (e.g., TJ Maxx, Ross)

5. Mail order/catalog

6. Custom, home sewn

7. Other _____

Q2. What size of ready-to-wear do you buy for the following categories?
Enter the size under the appropriate size category.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Miss Petite	Junior Petite	Junior	Misses	Tall	Womens	Half Size
Dress	___	___	___	___	___	___	___
Pants	___	___	___	___	___	___	___
Skirts	___	___	___	___	___	___	___
Blouse	___	___	___	___	___	___	___

Q3. What brand of clothing fits you best?
(e.g., Levi (pants) Liz Claiborne (dress)

Dress _____

Pants _____

Skirts _____

Blouse _____

Q4. Do you sew or have your clothing made by using commercial patterns
(e.g., Simplicity, McCalls, Vogue, Butterick)?

circle one

1. yes (If yes, continue to Q5.)

2. no   (If no, go to Q7.)

Q5. What size of commercial patterns do you buy for the following categories?
Enter the size under the appropriate size category.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Miss Petite	Junior Petite	Junior	Misses	Tall	Womens	Half Size
Dress	___	___	___	___	___	___	___
Pants	___	___	___	___	___	___	___
Skirts	___	___	___	___	___	___	___
Blouse	___	___	___	___	___	___	___

Q6. Are you satisfied with the fit of commercial patterns?

(74) [3]

   1. yes

   2. no

Q7. Are you satisfied with the fit of ready-to-wear?

(75) [9]

   1. yes

   2. no

Q8. Are fitting adjustments/alterations necessary?

(76) [10]

   1. yes

   2. no

Q9. Indicate whether or not the following locations in clothing cause problems by checking the appropriate space. If yes, circle specific reasons for the problems:

Location   Reasons for problems (circle the problem area)

Yes	No	Location				
___	___	Neck	1.Tight	2.Loose	3.High	4.Low(77)
___	___	Bust	1.Tight	2.Loose	3.High	4.Low
___	___	Waist	1.Tight	2.Loose	3.High	4.Low
___	___	Abdomen	1.Tight	2.Loose		
___	___	High Hip	1.Tight	2.Loose		(1) [15]
___	___	Full Hip	1.Tight	2.Loose	3.High	4.Low
___	___	Thigh	1.Tight	2.Loose		
___	___	Upper Arm	1.Tight	2.Loose		
___	___	Armhole	1.Tight	2.Loose		(5) [19]
___	___	Sleeve length	1.Long	2.Short		
___	___	Back Width	1.Narrow	2.Wide		
___	___	Shoulder seam	1.Long	2.Short	3.Wrong slope	
___	___	Dress length	1.Long	2.Short		
___	___	Pant length	1.Long	2.Short		(10) [24]
___	___	Crotch	1.Tight	2.Loose	3.Long	4.Short
___	___	Other	_____			

Label information

Q10. Which would you prefer:
    a. Size designation: ex. 12P   (12) [27]

        1. yes

        2. no

    b. Size designation plus critical measurements   (13) [28]
       ex: 12P bust 34", or waist or hip measure.

        1. yes

        2. no

Any comments? _____

_____

_____

NAME signature)_____

My signature above indicates I have reviewed the Human Subjects Consent form,
the project has been explained to me and I hereby give my permission for these
data to be utilized.

Optional:

ADDRESS   _____

CITY, STATE, ZIP_____

PHONE   _____

THE UNIVERSITY OF ARIZONA

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APPENDIX E

Pilot Instrument

CLOTHING QUESTIONNAIRE
Leisure Activity Score

1. Now I would like to ask you about some of your present activities. Please tell me if you participate in these activities often, sometimes or never.

	(often)	(sometimes)	(never)
a. watch T V or listen to the radio	3	2	1
b. play cards?	3	2	1
c. read books, magazines, or newspapers?	3	2	1
d. go to lectures or concerts?	3	2	1
e. go to the theater or movies?	3	2	1
f. travel or go on tours?	3	2	1
g. go for walks or biking?	3	2	1
h. go for rides?	3	2	1
i. do arts and crafts or sew?	3	2	1
j. fix things?	3	2	1
k. participate in church activities?	3	2	1
l. do volunteer work?	3	2	1
m. garden?	3	2	1
n. window shop?	3	2	1
o. sing or play a musical instrument?	3	2	1
p. do you go for walks in a mall?	3	2	1

2. Are there any activities or pastimes in which you participate that I have left out?

If yes what are they?	do you do this?		
_____	3	2	1
_____	3	2	1
_____	3	2	1

3. Of the activities chosen, were you more involved in your 20's?

4. Of the activities chosen, were you less involved in your 40?

5. Do you feel that clothing is just as important, less important, or more important to you now than when you were in your 20's (repeat question) 40's?

	less important	as important	more important
In your 20's	_____	_____	_____
In your 40's	_____	_____	_____

6. How interested are you in the fashion changes that take place each year?

Very much   somewhat   very little   not at all

7. How often do you enjoy looking at clothes in a store or store window?

often   sometimes   seldom   never

8. Do you like to spend time shopping for clothes?

yes   No

9. Do you ever go shopping just to look at merchandise with no intention of buying anything?

yes   no

10. Do you read fashion articles in magazines and newspapers?

yes   no

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11. Do you ever wish you had a new outfit or item of clothing to wear to the usual places you go, even if you don't need it?
yes   no

    If yes "how often"

often   sometimes   seldom

12. Do you ever refuse invitations to go out because you feel you do not have the right clothes to wear?
yes   no

    If yes "how often"

often   sometimes   seldom

13. Do you think other people pay any attention to the kind of clothes you wear?
yes   no

    If yes "how often"

often   sometimes   seldom

14. Do you feel the clothes you wear express something about you?

yes   no

PAST CLOTHING BEHAVIOUR

We would like to ask you some questions about your past activities and interests pertaining to clothing.

1. In your early 20's did you enjoy shopping for or making clothing for yourself?
yes   no

if yes "how often"

often   sometime   seldom

2. In your 40's did you enjoy shopping for or making clothing for yourself?
yes   no

If yes "how often"

often   sometime   seldom

3. Did you have fitting problems with your ready-to-wear clothing when you where in your 20's?

     yes   no

     If yes choose what ever applies of the following

	Too Tight	Too Loose	Too Short	Too Long
Neck				
Sleeves				
Waist				
Leg				
Shoulder				
Crotch				

4. Did you have the same or different fitting problems in your 40's?

5. Are there any types of clothing you enjoyed wearing when you were in your 20's and 30's that you no longer wear?

     Yes   No

     If yes what type and why (no more than 3 types)?

_____   _____

_____   _____

_____   _____

6. Are there any types of clothing you enjoyed wearing when you were in your 40's that you no longer wear?

     Yes   No

     If yes what type and why?

_____   _____

_____   _____

_____
_____

7. Why did you stop wearing those types of clothing?

    a. no longer available   _____
    b. change in clothing preference_____
    c. change in others expectations _____
    d. change in body size and shape _____

Demographics

1. What is your leve of education?

　　　Less than high school ____　　　High school _____
　　　Some college _____　　　B.S. Degree_____
　　　　　　　　Ph.D. Degree_____

2. Are you retired?　　　　　Yes　　　　　NO

　If yes what type work did you do?

_____

2. Are you presently employed?　　　Yes　　　　　No

　　　If yes what type work do you do?

_____

APPENDIX F

Final Instrument

CLOTHING QUESTIONNAIRE
Leisure Activity Score

1. Now I would like to ask you about some of your present activities. Please tell me if you participate in these activities often, sometimes or never.

	(often)	(sometimes)	(never)
a. watch TV or listen to the radio	3	2	1
b. play solitaire	3	2	1
c. read books, magazines, newspapers	3	2	1
d* go to lectures or concerts	3	2	1
e* go to the theater or movies	3	2	1
f* travel or go on tours	3	2	1
g. go for walks or biking alone	3	2	1
h. go for rides alone	3	2	1
i. do arts and crafts	3	2	1
j. home sewing	3	2	1
k* religiously organized activities	3	2	1
l* do volunteer work	3	2	1
m. garden on your own	3	2	1
n. shopping alone	3	2	1
o* play team card games	3	2	1
p* an exercise class/dance	3	2	1
q* gardening club or group	3	2	1
r. play golf or swim alone	3	2	1
s* entertain children/grandchildren	3	2	1
t* shopping with friends	3	2	1
u* go for walks/biking with friends	3	2	1

2. In your 20's did you participate often, sometimes or never in the following activities?

	(often)	(sometimes)	(never)
a. watch TV or listen to the radio	3	2	1
b. play solitaire	3	2	1
c. read books, magazines, newspapers	3	2	1
d* go to lectures or concerts	3	2	1
e* go to the theater or movies	3	2	1
f* travel or go on tours	3	2	1
g. go for walks or biking alone	3	2	1
h. go for rides alone	3	2	1
i. do arts and crafts	3	2	1
j. home sewing	3	2	1
k* religiously organized activities	3	2	1
l* do volunteer work	3	2	1
m. garden on your own	3	2	1
n. shopping alone	3	2	1
o* play team card games	3	2	1
p* an exercise class/dance	3	2	1
q* gardening club or group	3	2	1
r. play golf or swim alone	3	2	1
s* entertain children/grandchildren	3	2	1
t* shopping with friends	3	2	1
u* go for walks/biking with friends	3	2	1

3. In your 20's did you participate often, sometimes or never in   the following activities?

	(often)	(sometimes)	(never)
a. watch TV or listen to the radio	3	2	1
b. play solitaire	3	2	1
c. read books, magazines, newspapers	3	2	1
d* go to lectures or concerts	3	2	1
e* go to the theater or movies	3	2	1
f* travel or go on tours	3	2	1
g. go for walks or biking alone	3	2	1
h. go for rides alone	3	2	1
i. do arts and crafts	3	2	1
j. home sewing	3	2	1
k* religiously organized activities	3	2	1
l* do volunteer work	3	2	1
m. garden on your own	3	2	1
n. shopping alone	3	2	1
o* play team card games	3	2	1
p* an exercise class/dance	3	2	1
q* gardening club or group	3	2	1
r. play golf or swim alone	3	2	1
s* entertain children/grandchildren	3	2	1
t* shopping with friends	3	2	1
u* go for walks/biking with friends	3	2	1

FOR PARTICIPANTS 75 AND OVER

4.(75) In your 50's did you participate often, sometimes or never in the following activities?

	(often)	(sometimes)	(never)
a. watch TV or listen to the radio	3	2	1
b. play solitaire	3	2	1
c. read books, magazines, newspapers	3	2	1
d* go to lectures or concerts	3	2	1
e* go to the theater or movies	3	2	1
f* travel or go on tours	3	2	1
g. go for walks or biking alone	3	2	1
h. go for rides alone	3	2	1
i. do arts and crafts	3	2	1
j. home sewing	3	2	1
k* religiously organized activities	3	2	1
l* do volunteer work	3	2	1
m. garden on your own	3	2	1
n. shopping alone	3	2	1
o* play team card games	3	2	1
p* an exercise class/dance	3	2	1
q* gardening club or group	3	2	1
r. play golf or swim alone	3	2	1
s* entertain children/grandchildren	3	2	1
t* shopping with friends	3	2	1
u* go for walks/biking with friends	3	2	1

4.   less important   as important   more important
  In your 20's   _____   _____   _____
  In your 40's   _____   _____   _____

5. How interested are you in the fashion changes that take place   each year?

            Very much   somewhat   not at all

6. How often do you enjoy looking at clothes in a store or store window?

            often   sometimes   never

7. Do you like to spend time shopping for clothes?

            often   sometimes   never

8. Do you ever go shopping just to look at merchandise with no intention of buying anything?

            often   sometimes   never

9. Do you read fashion articles in magazines and newspapers?

            often   sometimes   never

10. Do you ever wish you had a new outfit or item of clothing to   wear to the usual places you go, even if you don't need it?

            often   sometimes   never

11. Do you ever refuse invitations to go out because you feel you   do not have the right clothes to wear?

            often   sometimes   never

12. Do you think other people pay any attention to the kind of   clothes you wear?

            often   sometimes   never

13. Do you feel the clothes you wear express something about you?

            often   sometimes   never

                    PAST CLOTHING BEHAVIOR

1. In your 20's did you enjoy shopping for clothing for yourself?

            often   sometime   never

2. In your 40's did you enjoy shopping for clothing for yourself?

            often   sometimes   never

3. In your 20's did you enjoy making clothing for yourself?

            often   sometimes   never

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4. In your 40's did you enjoy making clothing for yourself?

           often   sometimes   never

5. Did you have fitting problems with your ready-to-wear clothing when you where in your 20's?

          upper body   lower body
     (waist up)   (waist down)

_____   _____

_____   _____

_____   _____
               at the waist line

            _____

            _____

            _____

6. Did you have the same fitting problems in your 20's?

    yes   **no**

7. Did you have different fitting problems in your 40's?

    yes   **no**

    if yes what were they

    ------------------------   ------------------------

    _____   _____

    _____   _____

8. Are there any types of clothing you enjoyed wearing when you were in your 20's and 30's that you no longer wear?

        Yes   No

    If yes what type (no more than 3 types)?

    types _____

           _____

           _____

    why (check all that apply)?

    a. no longer available _____

    b. change in your clothing preference _____

    c. change in others expectations of you _____

    d. change in your body shape and size _____

9. Are there any types of clothing you enjoyed wearing when you were in your 40's that you no longer wear?

     Yes   No

     If yes what type?

types _____

                _____

                _____

     why (check all that apply)

     a. no longer available   _____

     b. change in your clothing preference_____

     c. change in others expectations of you _____

     d. change in your body size and shape _____

<div align="center">Demographics</div>

1. What is you highest level of education?

Less than high school ____	High school _____
Some college _____	B.S. Degree_____
M. S. Degree _____	Ph.D. Degree_____

2. Are you retired?   Yes   NO

 If yes what type work did you do?

_____

3. Are you presently employed?   Yes   No

     If yes what type work do you do?

_____

4. What is your marital status?

     Never married_____   Married_____

     Divorced _____   Widowed _____

5. Do you have children? yes #_____   no _____

                     grandchildren ? yes #_____ no___

<div align="center">(GO TO DEMOGRAPHICS ON PINK FORM)</div>

APPENDIX G

Article Manuscript

CONTINUITY OF CLOTHING INTEREST FOR WOMEN AGE 55 YEARS AND OLDER

(A manuscript prepared for submission to)
(Home Economics Research Journal)

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CONTINUITY OF CLOTHING INTEREST
FOR WOMEN AGE 55 YEARS AND OLDER

INTRODUCTION

The projected advent of "baby boomers" into post-maturity has impacted the ways in which society conceptualizes and delivers goods and services to the aging cohort. The 1990 U S Census shows that 51% of the total population is female and 23% is age 55 and above; thus, the female cohort comprises 12% of the total population for the United States (U. S Bureau of the census, 1990). By the year 2000 the projected population for females 65 years and over is 34.9 million.

Aging is not something that happens at the end of life but is a life long experience (Ferraro, 1990). Across a life span physical appearance in general, and clothing in particular, are tangible factors influencing the fulfillment of needs, concerns and choices perpetuating a sense of well-being. Clothing, at the basic level of need or concern, provides protection for the body from environmental extremes (Watkins, 1984). At the social level of needs or concerns, clothing influences self esteem (Kaiser, 1990), self-concept (Roach & Eicher, 1965), and belongingness (Ryan, 1966).

Throughout life, satisfaction of clothing concerns or needs is met when a garment meets three criteria for the wearer: psychological, sociological, and physiological. In this study leisure activities (sociological), and body measurements

(physiological) of women age 55 years and over were investigated to determine

indicators of continuity of clothing interest (psychological).

Clothing Interest

Gurel (1974) proposed the following definition for clothing interest;

"Clothing interest behavior may be referred to as that part of human behavior

specifically related to clothing, its selection, and its use, and its importance as a

persistent interest center to an individual. Clothing interest behavior is made up

of concerns for personal appearance and the management of clothing to

maintain this appearance. It involves a willingness to experiment with the use

of clothing, to be psychologically aware and curious about the effects of

clothing on others, to use clothing to bolster self-concept and security, and to

be interested in fashion and style. Concern for modesty in clothing, comfort

and fit, and some degree of conformity to societal norms is also part of the

personality pattern of a person manifesting high interest in clothing"(p. 124-

125).

Kaiser (1990) categorized the influencing dimensions of clothing interest levels in the

following manner: (1) concern with personal appearance, (2) experimentation with

appearance, (3) heightened awareness of clothing,(4) enhancement of personal

appearance, and (5) enhancement of individuality and uniqueness.

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In comparison with younger households, Chung (1990) found mean expenditures by elderly households to be lower. The lower mean was attributed to, among other factors, reduced clothing interest. Other studies have found high scoring on clothing interest scales by elderly subjects. Elderly adults with high clothing interest scores were well educated and spent a significant dollar amount of their total expenditures on clothing (Neal, Schwenk & Courtless, 1990).

Clothing interest, in Gurel's 1974 definition, is treated as a social-psychological behavior. From infancy, clothing plays an important part in the development of self-identity both individually and within groups. The infant is dressed in blue if it is a boy and in pink if the baby is a girl (Horn, 1975). Farmer and Gotwals (1982) states that "clothing is an extension of the self helping us to define who we are, what we like, and how we feel about our self". One's clothing acquisition and use is correlated with self-identity, modesty and self-esteem (Kaiser, 1990; Tychniewicz & Gonzales, 1978).

Clothing and Social Roles

Clothing, in addition to affecting self-identity and self-esteem, is often an indicator of role status within a social structure especially the occupational role. Individuals take on the attitudes, superstitions, and outward appearance of their work group, as well as the skills of a work/occupational role (Kaplan, 1979). Most individuals interact in numerous social structures and within each structure hold an identity unique to that structure, a social role. These "roles, include occupational roles,

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family roles, and sex-age roles" (Horn, 1975 p. 186). For some older individuals retirement removes them from the occupational role which may be their key social role.

Developing new relationships or interests in activities with persons outside the daily family/friend circle has implications for aiding healthy and happy aging (Palmore, 1979). Regardless of age or circumstance of life, an individual's appearance is a contributing element in one's relation with others (Hoffman, 1979). Clothing is often used as a means of gaining social approval and can express conformity or individuality in the presentation of self (Miller, Davis, & Rowold, 1982). Activity in a social situation can give one a sense of belonging to a social group (Mancini & Orthner, 1982).   For the retired and/or widowed female, the effective use of clothing to present an attractive appearance can provide an ego support. Hoffman (1970) states that "In developing new social relationships, in maintaining a positive self-image, and in providing ego support, clothing has special significance for older women ". Belonging is a dominant factor in the development of any social role (Mancini & Orthner, 1982). Role performance and life choices may be affected by clothing (Farmer & Gotwals, 1982). It is important that one's clothing be congruent with the role one holds in a social setting to maintain a sense of acceptance and belonging.

In this study, leisure activity of elderly is postulated as a social structure defined by the type and frequency of activity participation. Gordon, Gaitz, and Scott

(1976) conceptualize leisure as: ".... personally expressive discretionary activity ..." (p. 316). A leisure activity can involve learning a new skill, being physically active and independent of others, being physically active in a group, sedentary and done by alone, or sedentary in a group (Peppers, 1976). According to Bosse and Ekerdt (1981) retirees do not participate more or less in leisure activities but maintain a continuity of leisure activities.

Clothing and Comfort Factors

Gurel (1974) includes the concern for "clothing comfort and fit" as a concern in the behavioral pattern of an individual manifesting a high interest in clothing. Clothing fit is difficult to measure or define but is a major factor in determining garment comfort (Delk and Cassill, 1989). Shishoo (1990) and Stamper, Sharp, and Donnell, (1986) identify clothing fit by how the dimensions and proportions of the garment relate to the dimensions and proportions of the body.

As early as 1953, Blair reported that for women age 45 to 65 years to find well fitting ready-to-wear, they would have to maintain what they had found to be their ideal weight at age 35. The 45 to 65 year old participants in the Blair (1953) study cited problems with added weight, thickened waist, heavier upper arms, sagging busts, and rounded shoulders. Decline in stature also occurs as an individual advances in age induced by the settling of the spinal column due to the decrease in bone density of the vertebrae. These changes may appear as a curve on the upper back, the bowing of the head, or an involution of the skeleton (Hoffman, 1979; Tate & Glisson, 1961; Timiras

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& Meisami, 1972). Along with the decrease in stature the relocation of body fat may cause an increase in bulk, particularly in waistlines and hips (Timiras, 1972, Woodsen & Horridige, 1990).

Anthropometric measurements have been used to establish clothing fit. Anthropometry is a precise system of measuring the body in segments, measuring each segment by length and circumference (Lohman, Roche, & Martorell, 1988). The measurements comprising the PS 42-70 (the standard body measurements for the sizing of women ready-to-wear and commercial patterns) publication were taken by O'Brien in the late 1930's and were the first anthropometric measurements taken of women for clothing. Studies with anthropometric data have shown that there are detectable differences by race, sex, and age in body measurements (Giddings & Boles 1990; Milina, 1973; Roche, 1979). O'Brien (1941) reports a difference in the measurements of the women 60 years and older and the rest of the sample.

CONCEPTUAL FRAMEWORK

This study addresses some of the factors that influence the choice, acquisition and use of clothing as they apply to women age 55 years and older. The sample representing this cohort was viewed in relation to Branson and Sweeney's (1991) "Conceptualization and Measurement of Clothing Comfort". They conclude that judgement of clothing comfort is a triad consisting of the person, the clothing, and the environment. Branson and Sweeney (1991) further suggest that each element of the

triad has both physical and social-psychological elements that influence physiological and/or perceptual judgements of clothing comfort. The Branson and Sweeney (1991) model includes a filter component/process by which the individual incorporates past experiences or remembrances to judge a garment's comfort.

The filter element of the Branson and Sweeney (1991) model has close similarities to the Theory of Continuity. The Theory of Continuity proposes that as older adults go through the typical changes in the process of normal aging, they attempt to maintain their known psychological, sociological, and physiological status by using adaptation strategies that are reflective of past experiences (Atchley, 1989). The continuity theory provides an "understanding of adaptation of individuals to their changing social contexts, both as they age and from social change" (Morgan, 1976).

Method

The 122 subjects were selected from women 55 years and over who are associated with agents and/or volunteers through Cooperative Extension programs or activities. Virginia Cooperative Extension agents and/or volunteers in participating units recruited the subjects.

All measurements except weight and shoulder slope were taken in metric units. Dimensional measurements were taken using a measuring tape, an L-square, and a goniometer provided in the ASTM research kit. A hospital scale was used for height and weight. Measurements were taken in accordance with the instruction provided by

the ASTM committee for the national study as described in the PS 42-70 publication (U S Department of Commerce,

1971).

The interview questionnaire was dual functional with items from the ASTM committee and items specific to this study. Items related to current and past clothing interest were designed by the researcher. Items related to past fitting problems were also designed to correspond with the present fitting problem items provided through the national study. Statistical analysis was done with the SAS statistical program.

RESULTS AND DISCUSSION

In this paper continuity of clothing interest and the relationship between clothing interest and reported current and past satisfaction of clothing fit for 122 women age 55 to 88 years was explored. The sample was divided into two groups labeled "younger" (64 at 55-67 years) and "older" (58 at 68-88 years). Seventy-eight percent of the sample was Caucasian compared to 90.7% in the national sample, 22% of this sample was Black. More than 60% of the sample were in the $10,000 to $30,000 annual family income range, the remaining 40% was below or above this range, and 50% of the national sample were in this income range. The geographical representation was south-east and south-west Virginia. More than 50% of the sample was married and 33% widows. Over 65% had finished high school and/or had some college, and 80% was employed. Demographic breakdown in Table 1.

TABLE 1. Demographics of Subjects

Demographic Categories	Sample Frequency	Sample Pecrcent	National Sample
Age:			
Younger (55 to 67 yrs)	64	52.5	
National Sample (55 to 64 yrs)			37.1
Older (68 to 88 yrs)	58	47.5	
Nationla Sample (65 and older)			62.8
Race:			
Black	27	22.0	5.9
Caucasian	96	78.0	90.7
Income:			
< $10,000	16	14.5	16.0
$10,001 - $20,000	34	30.9	28.0
$20,001 - $30,000	38	34.5	25.0
> $30,000	22	20.0	31.0
Martial Status:			
Married	70	57.9	NA
Widow	40	33.1	NA
Divorced	6	5.0	NA
Never Married	5	4.1	NA
Education Level:			
< High School	16	13.2	NA
High School	46	38.0	NA
Some College	37	30.6	NA
College Degree	22	18.2	NA
Employment Status:			
Employed	96	80.0	NA
Retired	24	20.0	NA

Clothing Interest Levels

HO: 1 There will be no difference in current clothing interest levels and recalled clothing interest levels for;

_ age 20 years

- age 40 years

Clothing interest has been addressed previously as it relates to economic and other social interactions by post-maturity individuals. Earlier examinations referenced subjects' levels of clothing interest at the time of the study; and when the results indicated low clothing interest it was concluded that clothing interest declines with advancing age. The contention of this study is that post-maturity females maintain continuity of clothing interest. Although a woman may be dissatisfied with the availability of apparel that meets her needs; there is continuity in her level of clothing interest exhibited through her behaviors to satisfy her clothing needs.

For this study continuity of clothing interest is based on current clothing interest and recalled interest from respondents' forties and twenties. Clothing interest is exhibited in behaviors involving the acquisition, care, and the use of clothing as it relates to self and others.

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Means for clothing interest, for current and recall, were not significantly different when tested with a T-test and a Duncan's Multiple Range Test (MRT). The results are shown in Table 2.1. and Table 2.2.

Respondents who were interested in shopping for clothing, reading fashion magazines, sewing their own clothing, etc., were interested in their twenties, their forties, and still are interested. Those not interested are still not interested. Respondents were given the opportunity to make comments addressed to the clothing industry regarding their needs and interests. Eighteen subjects made comments pertaining to design and styles   available to post-maturity females. From a 68 year old subject "I sew

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TABLE 2.1. T-Test for Clothing Interest by Age Group Across Age Periods

Age Group	N	Mean	Std Dev	DF	Prob>/T
		Current Interest			
Younger (55-67 yrs)	64	10.69	2.95	118	0.82
Older (68-88 yrs.)	56	10.57	2.60	118	0.82
		Interests in Twenties			
Younger	63	3.46	1.28	119	0.17
Older	58	3.78	1.15	119	0.16
		Interests in Forties			
Younger	64	3.48	1.23	120	0.15
Older	58	3.79	1.12	120	0.15

TABLE 4.2. Clothing Interest levels.

Clothing Interest

Age Period

	Forties	Twenties	Current
Mean	1.21	1.20	1.18
	N = 122	N = 121	N = 120

NOTE **any group underlined by the same line is** not **significantly different.**

because I can't find styles I like"; a 75 year old "I can't find colors I like"; a 74 year old "most styles are too frilly and youthful"; a 76 year old "give more consideration for styles that are appropriate for women over age 55"; a 69 year old "clothing styled for my age group makes me feel dowdy, I would like brighter colors" . Other comments related to sizing "larger petite sizes", "better selection with long and three-quarter sleeves", "better selection in larger sizes ---- in tall sizes"

Looking more closely at the mean, the current clothing interest by age group (younger and older) the standard deviation (SD) is greater by 0.35 for the younger group than the older group. The SD for recalled clothing interest for age periods of twenties and forties by age group shows the younger group to have a slightly higher variance of 0.13 and 0.11 respectfully than the older group.

For this sample there is evidence of continuity of clothing interest across their adult life span. This deduction is based on the insignificant difference in the respondents' current clothing interest scores and the recalled clothing interest scores.

HO: 2 There will be an association between current clothing interest and satisfaction with apparel fit.

Results in Table 3 confirm hypothesis 2. A Paired T-test of current clothing interest and satisfaction with clothing fit yielded a T-probability of 0.91 for both satisfaction and dissatisfaction with apparel fit. The SD was 3.14 for satisfaction with apparel fit and 2.54 for dissatisfaction with apparel fit. A Pearson Correlation Coefficients procedure showed there was a positive relationship between current

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leisure activities and current clothing interest with an r-value of 0.0142. Participants in this study exhibited high clothing interest in their responses to the clothing interest items.

There were no differences between current clothing interest levels and recalled clothing interest levels for subjects at ages spanning decades in their twenties and forties. The women all showed an active interest in clothing even the older members of the sample. A concern that little attention is given to the lack of variety in style, color, and fabric design was voiced. The findings here serve as evidence that there is continuity or little change in levels of clothing interest for women in the post-maturity phase from when they were young adults.

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EDUCATIONAL INSTITUTIONS ATTENDED: Dates Degree and Date

Institution	Dates	Degree and Date
Line Consolidated High School Ripley, MS	7/60 5/65	H. S. Diploma, 1965
University of Mississippi Oxford, MS	5/88 5/90	B. S., May 1990
Viginia Tech Backsburg, VA	5/90 12/94	M. S., December 1994

POSITIONS HELD: Graduate Assistant, department of Clothing and Textiles,
Virginia Tech   1990-1994

Graduate Assistant, Deans Office College of Human Resources
Virginia Tech   1992-1994

Bookkeeper/Data Entry, The Peoples Bank
Ripley, MS   1976-1988

Sewing Machine Operator, Genesco Shoe Co.
Ripley, MS   1974-1976

Sewing Machine Operator, MeGregor, Inc.
Walnut, MS   1966-1968 & 1970-1972

Teacher's Aide, Falkner Elememtary School
Falkner, MS   1968-1969

Earline Rainer-Jeanes