

AN EXPLORATION OF BODY IMAGE AND PSYCHOLOGICAL WELL-BEING
AMONG AGING AFRICAN AMERICAN AND EUROPEAN AMERICAN WOMEN

by

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To my parents, who have always encouraged me, inspired me, and gave me their support.

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ABSTRACT

There is a large literature on the association between body image and women's mental and physical health. However, this work has focused on young women's appearance concerns. For older women, body concerns may center on age-related changes in both appearance and functioning. In this dissertation, I draw upon theories of aging and body image to theorize predictors and outcomes associated with older women's body perceptions; this model is tested in three studies using data from two samples of community-based women (African American and European American) aged 65 and older.

Study one explored how women rated their satisfaction with particular features of the body, and the importance they attributed to these features. Two subscales were identified — perceptions of bodily function and appearance, and perceptions of cosmetic appearance— and a confirmatory factor analysis showed there were no significant differences in the factor structure between the two ethnic groups. Study two showed that femininity was unrelated to body perceptions for African American women, but moderated the relationship between social comparison and perceptions of bodily satisfaction and appearance for European American women. For European American women, engaging in social comparison was associated with more positive body esteem, while the opposite pattern emerged for the African American women. Study three showed that for both ethnic groups, bodily function and appearance was negatively associated with depression. However, depression was unrelated to perceptions of

cosmetic appearance. For European American women, social engagement mediated the relationship between perceptions of bodily function and appearance and depression.

Findings suggest that older women are primarily concerned with aspects of the body related to functionality, and significant variations emerged between ethnic groups on the effect of social comparison on body perceptions. More research is needed to examine the effects of functional limitations and age related changes on body perceptions among diverse older women. Body perceptions affect health, psychological well-being, and quality of life, and additional research is needed to better understand the associations between these aspects of life.

CHAPTER I

OVERVIEW

Human bodies have been studied in a wide range of disciplines, as their presentation and functioning affect nearly all aspects of life. Bodies provide a rich site for research, as they are constructed and experienced on both an individual and social level. Individually, the body is experienced in terms of physically determined experiences, such as health, illness, body size, and ability. Socially, bodies are constructed and appraised through various lenses, including (but not limited to) gender and age. That is, we gather information, and consequently make inferences about other individuals' gender and age based on the appearance of their bodies. Social experiences, such as being objectified or assessed physically by others (Fredrickson & Roberts, 1997) are often psychologically internalized, and produce a range of responses, such as resisting ascribed roles, attending to the appearance of the body, and experiencing feelings of dissatisfaction or shame about the body.

Experiences of gender, body image, and mental health are particularly important to examine among aging women (defined here as women older than 65), as the bodily changes they experience may have psychological consequences, and at the same time their age, gender, and ethnicity may also affect how their bodies are viewed and treated. Older women's health is a central issue, as the population of adults above the age of 65 is growing rapidly, the aging population is disproportionately women (Antonucci, Blieszner, & Denmark, 2010), and body

image has been established as an important component of both mental (i.e., depression and anxiety) and physical health, (e.g., disordered eating among younger women).

However, body concerns and the associations between body perceptions and mental health vary for women in different ethnic groups (Roberts, Cash, Feingold, & Johnson, 2006; Siegel, Yancy, & McCarthy, 2000). Yet even as little research has examined how experiences of age and body image are related to psychological well being among older women, even less is known about how these patterns vary for women in different ethnic groups. In response to these absences in the literature, this dissertation will examine: patterns of body satisfaction and the importance placed on the body for European American and African American women ages 65 and older; the relationships between constructs thought to predict satisfaction with different aspects of body satisfaction and the variation in these patterns based on ethnic group; and the relationship between different dimensions of body satisfaction and depression.

CHAPTER II

LITERATURE REVIEW

Theories of Aging

Several existing theoretical frameworks can help us understand aging women's body perceptions. A number of complementary theories and approaches to the study of aging have been developed over the past 30 years, and have defined the framework with which gerontological research is produced and interpreted. In particular, these theories have focused on emphasizing positive gains and positive experiences of aging (Baltes & Baltes, 1990; Rowe & Kahn, 1987), though some scholars have criticized this approach (Dillaway & Byrnes, 2009; Minkler & Fadem, 2002).

One of these theories, successful aging, was developed from the landmark MacArthur Study, (Rowe & Kahn, 1987). This approach focuses on positive aspects of living a long life, and was one of the first to conceptualize aging in terms other than mortality, disability and cognitive decline (Rowe, 1997). In particular, this approach differentiated between "usual aging," which is often characterized by normal decline in cognitive, physical, and social functioning, and "successful aging," in which functional loss is minimized. Rowe and Kahn (1987) argued that three main criteria must be met for successful aging; first, older adults must be free from disease and disability; second, older adults must maintain physical and mental functioning; and third, older adults must remain active and demonstrate engagement with life.

These three dimensions are almost certainly related, and findings from the MacArthur Study suggested that behaviors such as sustained engagement in physical activity and remaining socially active were associated with physical functionality and other positive health benefits (Rowe & Kahn, 1997; Unger, McAvay, Bruce, Berkman, & Seeman, 1999). One often unstated implication with regard to successful aging is that the body factors centrally in whether older adults are aging successfully. Specifically, older adults who engage in physical activity and remain socially engaged may experience benefits that directly affect the function of the body—and likely affect feelings about the body. However, the association between the criteria for successful aging and body perceptions are as of yet unexplored.

Critics of the successful aging approach have argued that some individuals may experience positive or “successful” outcomes associated with age in the face of disability or impairment. Specifically, Minkler and Fadem (2002) argued that individuals with lifelong disability or impairment may find ways to manipulate their environment and develop strategies to compensate for impaired function. As a result, these researchers and others have suggested that assessing individuals’ subjective health and psychological well-being may be one way to measure successful aging without relying on objective measures of physical ability (Freund & Baltes, 1998; Inui, 2003; Kanning & Schlicht, 2008; Strawbridge, Wallhagen, & Cohen, 2002). This development further supports the idea that perceptions of health, well-being, and aging play a central role in how well individuals age.

One way that changes in the body may affect perceptions of aging is through changes in physical ability or function; that is, as individuals experience age-related changes in their bodies, attitudes toward their bodies may be expected to change in response. Although loss of function may occur in old age, aging is a process negotiated through a balance between managing losses

and gains (Baltes & Baltes, 1990; Freund, 2008; Kunzman, Little, & Smith, 2000). In particular, older adults may focus on their strengths to attenuate the effects of age-related losses (Baltes & Carstensen, 1996). This approach has been termed the selective optimization and compensation model (Baltes & Baltes, 1990). In particular, adults who are selectively optimizing their strengths choose to focus on aspects of life that are of importance, and allocate their resources to these areas. This selective focus optimizes positive developments and compensates for the experience of any functional losses (Baltes & Baltes, 1990). One key factor in this theory is older adults' perceptions of the gains and losses they experience as a function of age. It is possible that for some individuals, changes in the function of the body and age related changes in appearance may be seen as losses, and may be associated with negative perceptions of aging. For others, holding positive perceptions of their bodies and appearance may contribute to positive experiences of aging, and consequently, better mental health.

Perceptions of aging are central to selective optimization theory, and may affect outcomes related to successful aging. One such perception is that of subjective age, or how old one feels. On average, older adults report feeling younger than their actual age (Galambos, Turner, & Tilton-Weaver, 2005; Gana, Alaphilippe, & Bailly, 2004; Rubin & Berntsen, 2006), and feeling younger than one's chronological age and feelings of satisfaction about age are thought to be positive reflections of the aging process (Levy, 2003; Kleinspehn-Ammerlahn, Kotter-Gruhn, & Smith, 2008). Subjective age has also been associated with successful aging, as feeling younger has been linked to good health and positive well-being (Hubley & Hultsch, 1994; Westerhof & Barrett, 2005). Additionally, positive self perceptions of aging (i.e., feeling good about one's age) are associated with sustained social engagement, higher self esteem and psychological well-being, and better physical functioning (Baltes & Smith, 2003; Heckhausen &

Kruger, 1993; Kleinspehn-Ammerlahn, Kotter-Gruhn, & Smith, 2008; Sneed & Whitbourne, 2005).

Subjective age has also been linked to appearance, and some researchers (e.g., Kastenbaum, Derbin, Sabatini, and Artt, 1972; Kleinspehn-Ammerlahn, Kotter-Gruhn, & Smith, 2008) have differentiated between felt subjective age (i.e., how old one feels) and subjective age associated with physical appearance. Self-perception of physical age, which has also been referred to as “look age,” is considered to be an appraisal of the signs of biological aging (Kleinspehn-Ammerlahn, Kotter-Gruhn, & Smith, 2008). Kleinspehn-Ammerlahn, Kotter-Gruhn, and Smith (2008) found that among individuals 70 and older, the discrepancy between self perceived physical age and actual age decreased over time, and satisfaction with aging decreased as well. Additionally, women in this study reported higher self perceived physical age and lower aging satisfaction than men, indicating that older women’s perceptions of age-related appearance may influence negative perceptions of aging. Along these lines, Clarke (2001) reported that older women often report an incongruity between their subjective age and the image of their body as reflected in a mirror. The pattern that older women don’t feel as old as they are, yet they may recognize the physical signs of aging, has the potential to affect their subjective age, body image, and psychological well-being.

Age related changes in the body—both in terms of physical functioning and appearance—likely affect the psychological well being of older adults. Individual’s perceptions of these changes shape the positive and negative effects associated with aging. Specifically, older adults may optimize their strengths and abilities to compensate for perceived age related changes. This strategy is particularly useful when considering how older women cope with bodily and appearance changes associated with age. Feelings about age and the evaluation of

body changes are integral components of the body perceptions of older women, and must be considered to assess the association between body perceptions and psychological well-being.

Body Image and Aging

Body image has been conceptualized as a key factor in women's health and well-being (Cash & Fleming, 2002), yet the majority of this research has been based on the experiences of young European American women (Poran, 2006), and little is known about body image among diverse older women. In the following literature review, I present research with an emphasis on how theories of body image apply to older women, and how this might vary for European American and African American women.

Conceptualizing and theorizing body image. Body image has been defined as “an individual's appraisal of and feelings about the body” (Cornwall & Schmitt, 1990), and is an important part of our identity and self concept, as feelings about the body may influence the way we think about ourselves and our capabilities (Chrisler & Ghiz, 1993). Body image is a multidimensional construct including public body consciousness, (i.e., concern with external body attributes, such as feelings about appearance) and private body consciousness, (i.e., internal feelings and overall physical condition) (Miller, Murphy, & Buss, 1981). Thompson, Heinberg, Altabe, and Tantleff-Dunn (1999) described body image is an umbrella term, consisting of many different components, including (but not limited to): weight satisfaction, size perception accuracy, appearance satisfaction, body satisfaction, appearance orientation, body schema, and body esteem. The term “body image” itself is a global construct that needs specification as to which aspects of the body are being examined and in what way. For this reason, researchers need

to be attentive to how questions about the body are asked, what constructs are specifically being measured, and what conclusions are drawn from particular body image measures.

Body image has been conceptualized as existing on a continuum (Mintz & Betz, 1988; Scarano & Kalodner-Martin, 1994; Thompson et. al., 1998; Tylka & Subich, 1999). In this model, levels of body image disturbance range from extreme to none, with most people falling somewhere in the middle. Those in the middle likely experience mild to moderate body related concerns, while those with higher levels of body image disturbance are more likely to exhibit symptoms of disordered eating and depression (Mintz, O'Halloran, Mulholland, & Schneider, 1997; Thompson et. al., 1998). There is a strong association between feelings about the body and self-worth and well-being. In particular, body dissatisfaction is associated with various forms of psychopathology, including disordered eating, depression, and anxiety (Forman & Davis, 2005; Tylka, 2004).

A number of theories have been developed to explain the significance of body image including (but not limited to) sociocultural theories, many of which incorporate a feminist approach (Cash & Pruzinsky, 2004). Sociocultural approaches seek to understand human behavior by examining how cultural values influence individual values and experiences, and how these values are reflected in a person's cognitions and behaviors (Cash & Pruzinsky, 2004; Jackson, 1992; Jackson, 2004). In particular, social expectancy theorists argue that cultural values shape how individuals perceive and evaluate others, and that this, in turn, influences how others evaluate themselves (Jackson, 2004). In terms of body image, this theory posits that within a culture, people share socially defined standards of attractiveness, as well as expectations about people that are considered attractive. As a result, they behave differently towards individuals that are considered to be attractive, and in turn, this differential behavior leads to

differences in how individuals respond to such treatment. Finally, these behavioral differences in treatment of individuals deemed attractive or unattractive by cultural standards shape self concept (Jackson, 2004).

Given that Western culture highly values physical attractiveness, individuals often associate feelings of self worth with their appearance, and in particular, studies of young adult women show they associate their appearance with their overall self worth more than men (Sanchez & Crocker, 2005). Evans (2003) found that many college-aged women believed that possessing a thin, attractive body by conventional beauty standards would lead happiness and overall success in life. Additionally, many people implicitly associate positive personality characteristics, such as intelligence and kindness, with physical attractiveness. This association has been termed the “what-is-beautiful-is-good” phenomenon and helps to explain why many individuals highly value their physical appearance (Dion, Berscheid, & Walster, 1972; Eagly et al. 1991; Feingold 1992; Jackson, Hunter, & Hodge, 1995). Women are judged based upon their appearance more often than men (Fredrickson & Roberts, 1997), and being considered attractive by cultural standards translates into less discrimination and more life opportunities (Fiske, Bersoff, Borgida, Deaux, & Heilman, 1991; Margolin & White, 1987). Specifically, women’s appearance and/or weight has been the basis for discrimination, indicating that women’s social and economic prospects are often tied to appearance and weight (Myers, Rothblum, & Chin, 2010; Rhode, 2010).

Due to the association between treatment in society and physical attractiveness, some theorists (e.g., Unger, 1979; Wolf, 1991; Hesse-Biber et al., 2006) have asserted that physical beauty is associated with status and power for women. However, this form of power is not without cost or consequence. As Fredrickson and Roberts (1997) pointed out, for women to

capitalize on this power they must do so in a heteronormative context, and specifically in relation to White men. That is, standards of beauty are determined by and reflect the characteristics of the dominant group. Hurtado (1989) argued that White women are seduced by this form of power, and work to meet the dominant standards for recognition and access to power through their association with White men. On the other hand, women of color are often rejected by White men and left out of this power exchange (Hurtado, 1989).

For this reason, women that do not fit the dominant standards of beauty may be dismissed, including many women who simultaneously experience other forms of oppression. Fredrickson and Roberts (1997) argued that women in low status groups (such as lesbians, ethnic minority women, and poor women) may also be subject to heterosexism, racism, and classism above and beyond the negative judgments based upon social evaluation. One group that is conspicuously missing from this list is old women, who likely face discrimination in the form of ageism (North & Fiske, 2012). One central component of the beauty ideal that often goes unacknowledged is age. Specifically, there is a strong association between beauty and youth, and by definition older women are less valued than younger women in terms of their appearance. Older women may also experience discrimination based upon both gender and age when appearance influences individuals' judgments of and interactions with members of this group.

Older women are not highly visible in western culture, and those who are thought to be aging well are often held up as an example because of their lack of visible signs of aging (Chrisler & Ghiz, 1993). Additionally, images of older women have been largely absent from mainstream media. One study examined the representations of older women in popular magazines, and found that older women were not well represented in this medium and those who were depicted had significantly larger body sizes and were more clothed than younger models

(Bessenoff & Del Priore, 2007). The researchers argued that showing older women's bodies less frequently and more covered implies that society does not find age and sexiness as being compatible. This is particularly problematic if women's social value is defined in terms of sexiness.

Body image is particularly relevant to study among older women, because gender and age are social variables that are often "read" on the body, and may lead some women to feel that their bodies are inadequate or lacking. Normative aging is often associated with a loss of beauty, making older women more susceptible to body image concerns (Peat, Peyerl, & Muhlenkamp, 2008). Because of the association between beauty and youth, women "lose their social value simply by growing old" (Garner, 1999, p. 4).

Although large changes in body image are unlikely to occur from day to day, in general, body image should not be considered "fixed or static" (Pruzinsky & Cash, 1990). Rather, body image develops throughout the lifespan as a result of individual experience, cultural norms and cues, physical appearance and changes in the body, and relationships with others (Chrisler & Ghiz, 1993). Body dissatisfaction levels off after adolescence and remains relatively stable across the adult years (Bedford & Johnson, 2006; Cash & Henry, 1995; Tiggemann, 2004; Tiggemann & Lynch, 2001; Wilcox, 1997). However, this broad pattern has not included research addressing of diverse populations of women, and does not account for women who retain a high level of dissatisfaction with their bodies throughout their adult years, or for women who become more concerned with the body, which may include concern with new aspects of the body, as they age. Although it is important to examine multiple dimensions of the body for all individuals, much of the research on body image among younger women (e.g., college-aged

through middle age) has focused primarily on body shape and weight (Tiggemann & Lynch, 2001; Peat, Peyerl, & Muhlenkamp, 2008).

Another sociocultural theory that has garnered a good deal of attention and has initiated a wide body of research in the past 15 years is objectification theory (Fredrickson & Roberts, 1997). This theory, which draws upon a feminist framework, posits that the routine sexual objectification of women leads women to internalize an outsider's perspective on their own bodies (McKinley & Hyde, 1996; Fredrickson & Roberts, 1997). Feminist scholars have argued that women's bodies are constructed as objects to be looked at (Spitzack, 1990; Kaschak, 1992; Mulvey, 1975). The sexual objectification of women's bodies can be seen in various forms, including in media portrayals of women as sexualized objects (Bordo, 1993; Kilbourne 2000; Wolf, 1991), and in interpersonal interactions in which women are viewed or treated as sexualized objects (Landrine & Klonoff, 1997).

When women internalize this perspective, they begin to see their own bodies as sexualized objects to be seen and evaluated by others. This has been termed self-objectification. Self-objectification is often manifested through habitual body monitoring (such as frequently checking one's appearance in the mirror), as women try to assess their appearance as an outsider would (McKinley & Hyde, 1996, Fredrickson & Roberts, 1997). Focusing primarily on external physical attributes may lead women to lose touch with their internal bodily states because they may have fewer perceptual resources with which to attend to feelings and physiological cues (Fredrickson & Roberts, 1997; Tiggeman, 2011). This shift in perspective is important because body surveillance has been linked to increased disordered eating, depression, and sexual dysfunction (Szymanski & Henning, 2007; Tiggeman, 2011; Tylka & Hill, 2004). Objectification theory linked the sociocultural pressures influencing women to take a particular

perspective on their bodies and the psychological outcomes associated with this behavior. This theory has proven particularly fruitful for psychological research on body image, as it helped us understand both the causes and consequences of women's body image distress.

Although a growing body of research indicates that body dissatisfaction is prevalent among older women (Allaz, Bernstein, Rouget, Archinard, & Morabia, 1998; Lewis & Cachelin, 2001; Mangweth-Matzek et. al, 2006; Webster & Tiggemann, 2003), researchers have also suggested that the importance of physical appearance diminishes with age (Feingold & Mazella, 1998; Pliner et. al, 1990; Tiggemann & Lynch, 2001), and that investment in appearance needs to be distinguished from satisfaction with appearance (Tiggemann & Lynch, 2001). Tiggeman and Lynch (2001) found that although there was no correlation between age and body dissatisfaction in a sample of women ages 20 to 84, women over 70 reported less self-objectification, appearance anxiety, and disordered eating. They concluded that body dissatisfaction may remain stable over the lifespan, but the meaning of weight and feelings about the body should not be assumed to be constant over time. In a study of women ages 20 to 65, Webster and Tiggemann (2003) found that body dissatisfaction was related to self concept and self esteem for women at all ages in the sample; however, the strength of the relationship weakened for older women, indicating that as women age, they develop cognitive strategies to protect their self-concept and self-esteem from the impact of body dissatisfaction. Along the same lines, Hurd (2000) explained that for older women, seeming contradictions about body image (such as reporting the internalization of ageist norms about women's bodies, yet valuing health over appearance) reveal a shift in priorities for older women.

It is important to distinguish between different dimensions of body image, as women in different age groups may express some negative feelings on one dimension, while holding more

favorable opinions of other dimensions (Montepare, 2006). For example, a study comparing men and women ages 62-72 with younger adults (ages 17-28) found that the older participants were more conscious of their external physical appearance than younger adults were. However, the older adults were also more positive about their physical competence as compared to younger adults (Ross, Tait, Grossberg, Handal, Brandeberry, & Nakra, 1989). These findings suggest that focusing on only one aspect of the body may miss more complex and nuanced experiences of the body that may vary with age.

Specific aspects of the body that often reflect signs of aging may be of particular concern to older women. While younger adult women may be primarily concerned with aesthetic elements of appearance and weight/body size, older women's body perceptions may reflect different areas of concern. In particular, older women may be focused on aspects of appearance related to age, such as wrinkles in the skin, the firmness of the skin on their bodies, and hair color, all of which are culturally accepted markers of aging. Older women may also place more importance on the functional aspects of their bodies, as functional limitations are a primary concern for many individuals facing age related changes, and retaining physical function is a marker of successful aging (Chodzko-Zajko, Schwingel, & Park, 2009).

Older women may evaluate various aspects of their bodies based upon different criteria, such as how satisfied they are with particular aspects of the body as well as how important those body features are to them. The importance placed on various aspects of the body may change with age (Covan, 2005), and women who place low importance on some aspects of the body may do so because this evaluative process acts as a buffer against negative body perceptions. For example, if an older woman is not satisfied with an aspect of her body and considers it to have a low level of importance, this body aspect is less likely to affect her overall body esteem.

Alternately, an older woman who places a great deal of importance on a body feature may experience greater positive gains if she also feels positively about this feature, or this may have a greater negative impact if she feels lower satisfaction with this body feature. It is crucial to distinguish between these dimensions and to take them both into account when examining older women's body perceptions.

Body image and social comparison. Western culture promotes the evaluation of women in terms of their physical appearance, and women are often viewed as obtaining worth through how close they come to meeting ideal standards of beauty (Bordo, 1993; Chrisler & Ghiz, 1993; Garner, 1999; Wolf, 1991). In particular, the association between youth and beauty may be harmful for older women, as they move further from the youthful ideal, yet are still often subject to evaluation based on their appearance (Calasanti, 2005; Twigg, 2004). One effect this might have on older women may be the degree to which they compare their bodies to those of other women.

Social comparison serves the purpose of allowing individuals to assess their status in a given area by comparing themselves to others (Festinger 1954). Comparisons can be either upward, in which the target of the comparison is faring better than the individual making the comparison, or downward, wherein the target of the comparison is perceived to be less adequate in the area of comparison. Because women learn that their status and worth are often associated with the appearance of their bodies, many women routinely compare their bodies to those of other women. College-aged women tend to make upward comparisons to other women whom they perceive as more attractive, such as those that embody culturally prescribed beauty standards, and as a result, experience body image distress and body dissatisfaction (Morrison et

al. 2004; Paxton et al. 1999; Thompson et al. 1999; van den Berg et al. 2007; Engeln-Maddox 2005; Stormer and Thompson 1996; Tylka & Sabik, 2010; van den Berg et al. 2002).

It has been suggested that the comparisons older people make may influence their self-concept (Brown & Middendorf, 1996; Friedwijk, Buunk, Steverink, & Slaets, 2004). Peat, Peyerl, & Muehlenkamp (2008) explain that downward comparisons are seen as self-enhancing, whereas upward comparisons might be threatening. They argued that if older women compare themselves to younger women (for example, media images of younger women), their body image might suffer, whereas if they make a comparison to a same age peer that they consider less attractive, their positive body image feelings may be strengthened. Wilcox (1997) made a similar argument, suggesting that older women may adjust the target of their comparisons to boost self-esteem. Along the same lines, older adults tend to use social comparisons when evaluating their health, suggesting that social comparison may function differently in certain contexts (Heidrich & Ryff, 1993). Although older women may make downward comparisons that may bolster positive self-perceptions of health, it is unclear whether older women are also making downward comparisons in terms of appearance. College-age women often make upward comparisons that leave them feeling worse about their bodies (Stormer & Thompson 1996; Tylka & Sabik, 2010), but it is unclear if older women are mirroring this pattern, or if they utilize appearance comparison to buffer against negative body perceptions by comparing themselves to women they consider not to be aging as well in terms of physical appearance. Thus, research is needed that explores the meaning of social comparison among older women in the domain of appearance.

Femininity and body image. Because appearance is often central to women's self-concept, women in particular may be concerned with the effects of aging on their appearance (Gupta & Schork, 1993). Additionally, older women are routinely judged more harshly than

older men, and this pattern has been categorized as a double standard of aging (Wilcox, 1997). Women seem to be aware of this double standard, and lesbians and heterosexual women are equally concerned about it (Dworkin, 1989). Silver (2003) argued that gender makes a difference in the way that aging bodies are understood; specifically, women's bodies are more likely to be perceived as deformed or desexualized, and language describing older women reflects fear and rejection of aging female bodies.

Femininity is a multidimensional construct (Twenge, 1999) which includes prescriptions about how a woman should look and act in order to gain status and recognition *as* a woman. Much like the association between adhering to beauty standards and power, Cole and Zucker (2007) pointed out that femininity reflects a gendered power structure in which some women gain a higher status than others due to their adherence to a set of normative feminine behaviors (Collins, 2004). Women who do not effectively perform these behaviors are often criticized or face social reprimand (Prentice & Carranza, 2002). Maintaining a feminine appearance, including meeting societal beauty standards, is an important element to appearing feminine (West & Zimmerman, 1987).

Adherence to traditional gender roles may foster body image concern. A study of 600 women ages 10 to 79 found that all ages of women were more concerned than men about weight and physical appearance, and women with high femininity scores were the most concerned about their appearance and had the lowest self-esteem (Pliner, Chaiken, & Flett, 1990). Some researchers have found that men become dissatisfied with their appearance and body functioning with age (Baker & Gringart, 2009; Kaminski & Hayslip, 2006), and posit that women are freer from sexualization as they age, and may come to terms with the physical effects of aging sooner than their male counterparts. However, little evidence has demonstrated that women are

unconcerned with the effects of aging on their bodies, and endorsing a feminine gender role may contribute to some women's body concerns.

In sum, cultural values around attractiveness and beauty influence interactions with others based upon evaluation of physical characteristics. The cultural context that values the sexualization and objectification of women's bodies influences the way individual women view and treat their own bodies. For this reason, sociocultural theories are particularly important to consider when studying an aging population, because much like perceptions of attractiveness, perceptions of age shape expectations and treatment of others. Additionally, little is known about the way that older women view and treat their bodies, and it is likely that cultural beauty prescriptions shape many women's self perceptions and behavior with regard to the body. The extent to which women compare their bodies to others and adherence to traditional gender roles and may be associated with body perceptions among older women, and an exploration of these associations is needed.

Body image, aging, and mental health. Weight and depression are positively associated among college-age through middle age women (e.g., Forman-Hoffman, Yankey, Hillis, Wallace, & Wolinsky, 2007; Friedman & Brownell, 1995; Johnston, Johnson, McLeod, & Johnston, 2004). Body dissatisfaction has also been linked to unhealthy behaviors and poor psychological functioning (Bedford & Johnson, 2006) and to various forms of psychopathology, including disordered eating, depression, and anxiety among younger (college-age through middle age) women (Forman & Davis, 2005; Tylka & Hill, 2004). However, despite the fact that body and weight dissatisfaction have been linked to a number of serious mental health problems for younger women, few studies have examined the effect of body image on mental health among

older women (Peat, Peyerl, & Muehlenkamp, 2008). Thus body perceptions must be considered when examining older women's mental health.

Although a number of negative mental and physical health outcomes have been associated with body image, depression is of particular concern among aging populations. Depression has been identified as the most prevalent cause of emotional suffering in late life, and has a significant negative effect on quality of life among older adults (Berkman et. al., 1986; Blazer, 2002; Blazer, 2003; Blazer, Burchett, Service, & George, 1991; Blazer, Hughes, & George, 1987; Doraiswamy, Khan, Donahue, & Richard, 2002). Depression is also a risk factor for negative health outcomes, including mortality, poor immune function, and poor recovery from illness (Glass, De Lwon, Bassuk, & Berkman, 2006). Despite the importance of treating depressive symptoms among older adults, this population has been found to utilize mental health services at lower rates than younger adults. For example, Karlin, Duffy, and Gleaves (2008) found that older individuals were three times less likely than younger adults to receive outpatient mental health care, and older individuals most in need of mental health care were unlikely to receive treatment. This pattern indicates that many older adults who experience depression go untreated.

Depressive symptoms are no more frequent among older populations than among adults at midlife (Blazer, Burchett, Service, & George, 1991; Charles, Reynolds, & Gatz, 2001; Murrell, Himmelfarb, & Wright, 1983). However, some have suggested that rates of depression among the old are underreported due to the association between depression and mortality (Mirowsky & Reynolds, 2000). The oldest old (i.e., those 85 and older) show more frequent depressive symptoms than younger adults, but the relationship between depressive symptoms and age is not significant when age related factors (such as a higher proportion of women,

increased physical disability and cognitive impairment, and lower socioeconomic status) are controlled (Blazer, Burchett, Service, & George, 1991; Blazer, 2000).

Depression is particularly relevant to examine among women, as rates of depression are higher for women than for men. Women are twice as likely as men to develop depression (Kessler, McGonagle, Swartz, Blazer, & Nelson, 1993; Nolen-Hoeksema & Keita, 2003). The cause of depression is not different for men and women, but women tend to experience the causes of depression more frequently than do men (Nolen-Hoeksema, 2002). In particular, women's gender status and relative lack of power may contribute to greater levels of depression, as women are more likely than men to experience physical abuse, sexual abuse, and poverty, all of which have been associated with depression (Belle & Doucet, 2003; Koss, Bailey, Yuan, Herrera, & Lichter, 2003; Nolen-Hoeksema & Keita, 2003).

Among an aging population mental health may be strongly affected by bodily changes, specifically changes in physical functioning and ability. Maintaining physical functioning has been associated with positive gains in terms of both physical and mental health. Physical activity has been associated with positive mood, general well-being, and improved mental health (Blake, Mo, Malik, & Thomas, 2009; Chodzko-Zajko, Schwingel, & Park, 2009). Conversely, higher incidence of depressive symptoms has been associated with poorer physical functioning (Covinsky et al., 1997; Kempen et al., 1999), and among depressed individuals, physical functioning was comparable to or worse than people with chronic medical conditions (Wells et al., 1989). Although it's possible that depression interferes with physical functioning through a lack of interest in engaging in daily activities (Penninx et al., 1999), it is likely that the association between physical functioning and depression is bidirectional, and may entail both physiological and psychological components (Ostir, Ottenbacher, Fried, & Guralnik, 2007).

Despite the association between mental health and physical functioning—an indicator of bodily ability and maintenance—little is known about how perceptions of body functioning are related to mental health. This absence in the literature indicates that research on the relation between different dimensions of body image and mental health is needed. Attention needs to be given to variables that might reduce mental distress or depression.

Social support has been linked to psychological well-being in old age. Social support is a key aspect of successful aging, and Valliant and Mukamal (2001) argued that although social support is often thought to lead to successful aging, it is possible that mental and physical health in middle age may predict social support later in life. They explained that good social support in older age may be the result of the same variables (e.g., stable relationships, healthy behaviors, temperament, and mental health) that contribute to better health later in life. Along the same lines, Krause (2001) argued that perceived social support is the strongest predictor of health and well being for older adults, and many others (e.g., Antonucci, 2001; Rook, 1984; Russell & Cutrona, 1991; Seeman, 1996) have asserted that social relations are a crucial element in predicting both physical health and psychological well-being.

Social engagement may play a similar important role in predicting older women's mental health. Among adults aged 65 years and older, social engagement has been associated with lower levels of depression (Glass, deLeon, Bassuk, & Berkman, 2006). On the other hand, changes in physical ability and body image may lead to constraint in social and personal activities (Roberto & McGraw, 1991). These patterns indicate that there may be individual level variables that could potentially decrease levels of depression.

Higher rates of depression among women (Kessler, McGonagle, Swartz, Blazer, & Nelson, 1993; Nolen-Hoeksema & Keita, 2003), and the association between depression and

body image among women who have not yet reached old age (Forman & Davis, 2005), indicate that perceptions about the body play an important role in shaping women's mental health.

Because older women may experience unique body concerns related to aging, further exploration of the association between different dimensions of body satisfaction and depression among older women is needed.

Ethnic Differences in Body Image, Aging, and Mental Health

The relationship between age, gender, and body image is complex and multifaceted, and much work needs to be done to better understand individual differences among women. There is also a great deal of heterogeneity within the category of "older women," and significant differences based on membership in other social groups need to be explored. For example, the experiences of women with higher socioeconomic status are likely quite different from women in a lower socioeconomic strata. High SES women may be able to retire at earlier ages and to afford products and services to manage age related changes. Another example is in terms of sexuality; older lesbian women often feel doubly marginalized by their age and sexuality status, and as a result often feel they are socially invisible (Fullmer, Shenk, & Eastland, 1999).

When investigating body image and associated psychological consequences among women, ethnic differences often emerge. There is sufficient evidence to suggest that experiences of the body may not be uniform for women of different ethnic groups. Some researchers (e.g., Abrams, Allen, & Gray, 1993; Molloy & Herzberger, 1998; Root, 1990) have suggested that some aspects of ethnic culture could act as a buffer against this body dissatisfaction for African American women. First, there is a preference for larger body sizes within the African American community, and people that hold these preferences associate a larger body size with health and

prosperity (Ofusu, Lafreniere, & Senn, 1998). A number of studies have shown that African American culture is accepting of a variety of different body shapes and sizes (Craig, 2006; Lovejoy, 2001; Parker, Nichter, Vuckovic, Sims, & Ritenbaugh, 1995). Second, African American women may hold a different definition of attractiveness than do European American women. For African American women, physical attractiveness is more likely to be defined in terms of stylishness rather than as focused on body size (Webb, Looby, & Fulst-McMurtery, 2004). These significant cultural differences regarding the body may account for different levels of body satisfaction that have been repeatedly observed (Grabe & Hyde, 2006).

African American women may also differently value and experience femininity as compared to women in other ethnic groups. One reason that the experiences of women in this ethnic group may differ from the experiences of European American women may be in response to racialized stereotypes that have persisted. For example, Cole and Zucker (2007) found significant differences in the way that African American and European American women rated themselves on dimensions of femininity, and African American women rated themselves higher on items related to feminine appearance. One explanation for this finding is that many African American women have given a considerable amount of attention to grooming and clothing to counteract racist stereotypes of African American women as being sexually promiscuous and uncouth (Craig, 2002). Creating and maintaining a feminine appearance may also hold different meaning for African American women, as a number of sources have documented the pain experienced at being held to the beauty standards of European American women (Golden, 2004; Jones & Shorter-Gooden, 2003).

Ethnic groups may also vary in terms of their levels of body satisfaction, as research on college-age women suggests that European American women report more body dissatisfaction

and disordered eating than African American women (Altabe, 1998; Roberts, Cash, Feingold, & Johnson, 2006). European American and African American women also differ on body shape perceptions. Rucker and Cash (1992) suggest that differences in how African American and European American women view and feel about their bodies influences responses to changes in body weight and weight control practices. Along the same lines, a study comparing older women (mean age = 72) from these two ethnic groups on body shape perceptions found significant differences suggesting that overweight African American women underestimated their current body size (Schuler et. al., 2008). These perceptions are thought to contribute to the higher rates of obesity among African American women, and feelings about body size and weight may be of particular importance to study among women in this group. In particular, older African American women disproportionately experience health issues related to body size, including higher rates of obesity and diabetes (Carter, Pugh, & Monterrosa, 1996; Resnick, Valsania, Halter, & Lin, 1998). Ethnic differences in body satisfaction may influence how older African American women view and treat their bodies, yet little is known about this population.

African Americans hold different definitions of what is considered “healthy” than other ethnic groups. This may be because the meanings associated with this term are often linked to cultural and personal experiences (Damron-Rodriguez, Frank, Enriquez-Haass, & Reuben, 2005). A study comparing African American and European American elders (ages 70-79) found that when comparing participants with the same levels of objective physical functioning, older European American individuals were significantly more likely to report favorable health than African American participants (Spencer et. al., 2009). One possible explanation for this finding is that African Americans think about health problems when answering questions about self-reported health, whereas European American individuals tend to think about physical functioning

(Krause & Jay, 1994). The authors surmised that this difference arose because it reflected underlying differences in the health status of these groups.

The association between physical health and mental health may also vary significantly by ethnic group. There is a well-established association between symptoms of depression and overweight status (Forman-Hoffman et. al., 2007, Ross, 1994), though this may be of particular concern among African American women, (Siegel, Yancey, & McCarthy, 2000), for whom the association between symptoms of depression and weight may partially be explained by health status, such as higher rates of diabetes in this population (Blazer, Moody-Ayers, Craft-Morgan, & Burchett, 2002). Although some have found European American and African American adults to have similar depression rates (Blazer, Burchett, Service, & George, 1991; Berkman et. al., 1986), other studies have found lower rates of depressive symptoms in African American samples (Williams, Gonzalez, & Neighbors, 2007). Blazer (2003) noted that psychiatrists generally report that African Americans have fewer depressive symptoms and are less likely than European American adults to be treated with antidepressant medications (Blazer, Hybels, Simonsick, & Hanlon, 2000; Teresi et. al., 2002). Additionally, a study of women over the age of 65 showed that although African American women reported greater individual depressive symptoms (such as less hope about the future, poor appetite, and feeling disliked by others), when overall analyses controlled for demographic and health variables such as education, income, chronic health problems, and disability, racial differences in somatic complaints were nonexistent (Blazer, Landerman, Hays, Simonsick, & Saunders, 1998).

These findings indicate that different patterns may emerge when considering how African American women conceptualize and evaluate different aspects of body image and related constructs; the implication is that these patterns need to be examined separately for women in

different ethnic groups. Specifically, it is possible that older African American women may be more satisfied with some aspects of the body than their European American counterparts, yet little is known about this pattern among aging women. There may be significant differences in the relationship of individual factors to body satisfaction, such as adherence to traditional gender roles, and the tendency to engage in body comparison and body satisfaction. Last, little is known about the association between different dimensions of body satisfaction and mental health among older African American women. Given the considerable variation among ethnic groups when these patterns are assessed among younger women, further investigation into these associations among older African American women is needed.

The Current Study

This dissertation adds to the literature in a number of ways. Primarily, this research provides quantitative analyses of survey data examining the patterns of perceptions of body concerns among aging African American and European American women. Given the cultural focus on women's bodies (Bordo, 1993; Wolf, 1991), as well as the growing cultural notion that women should work to minimize the signs of aging (Chrisler & Ghiz, 1993; Saucier, 2004) and the fact that aging bodies are often viewed as less attractive and less capable (Garner, 1999), research examining how older women view and evaluate their bodies is in order. Based on the review of the previous literature, it is clear that body image is a multidimensional construct that contains different meanings for women in different groups. To address this, exploratory analyses were performed to examine aspects of body perceptions grouped together for African American and European American women.

Young African American and European American women often differ on mean scores for on measures of body image and related variables (Grabe & Hyde, 2006; Poran, 2006; Roberts, Cash, Feingold, & Johnson, 2006), though Jefferson and Stake (2009) examined dimensions of body image among college aged European American and African American women and found the factor structure of the body concerns for the ethnic groups to be invariant. However, this line of research has not yet been extended to examine body satisfaction patterns among older adults. Thus, confirmatory factor analysis was performed to determine whether the same factor structure underlies aging EA and AA women's body perceptions. Because women in these 2 groups may differ significantly on varying aspects of body perceptions, comparisons between the groups' mean scores on measures of body satisfaction and importance were also examined.

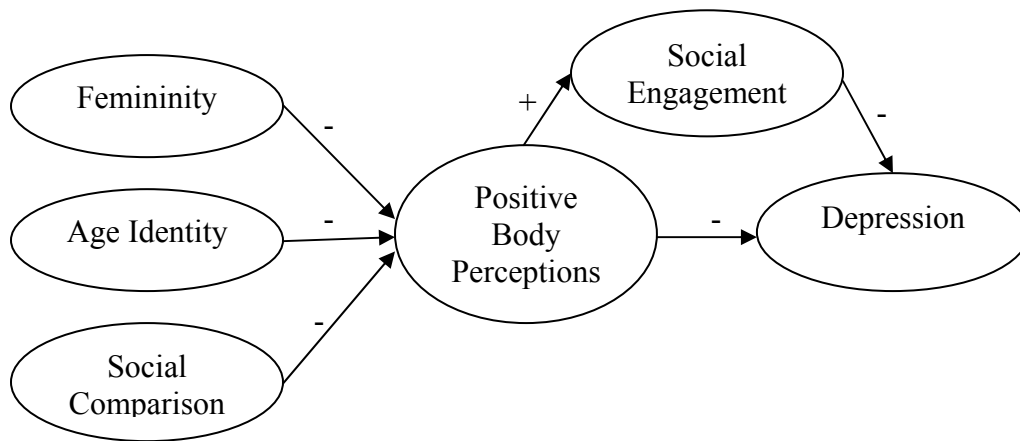
Predictors of body perceptions may also differ by ethnic group, and this pattern was examined by regression analyses run separately by ethnic group. This research explores the associations between body perceptions (in the domains of cosmetic appearance and bodily function and appearance) and variables conceptualized as predictors, including age identity, femininity, and social comparison.

Given that body satisfaction is a consistent predictor of depression among younger adult women, yet it is unclear if this relationship holds for older women, this research will examine the association between body perceptions, social factors, and depression. This association has been replicated numerous times in the literature on younger women's body image (Chaiton et. al., 2009; Muehlenkamp & Saris-Baglana, 2002; Stice et. al., 2000), however, it has yet to be empirically tested among older women.

The analyses presented here address this gap in the literature, and will create a foundation upon which to build further quantitative research in the area of body image and mental health

among older women. In sum, the following research questions were examined in two samples: African American women ages 65-96 and European American women ages 65-99.

Figure 2.1
Proposed Model of Theorized Predictor and Outcome Variables Associated with Body Perceptions



Research Question 1: The first research question will address patterns of body satisfaction and importance among African American and European American women. Specifically, does one group score higher on any aspects of body satisfaction and body importance than the other? What aspects of body satisfaction (as weighted by importance) group together into subscales? Are these subscales appropriate for both African American and European American women? I hypothesize that African American women will have higher average scores on measures of body satisfaction, whereas European American women will have higher average scores on measures of importance.

Research Question 2: The second research question will address whether various descriptive (i.e., age, BMI), as well as other personality and body image related variables

(subjective age, femininity, appearance comparison) are significantly associated with body perceptions for African American and European American women ages 65 and older. I hypothesize that subjective age, traditional feminine traits, and appearance comparison will be negatively related to positive body perceptions for both ethnic groups. Additionally, because there may be a significant interaction between femininity and appearance comparison, potential moderation will be assessed (See Figure 1).

Research Question 3: The third research question will examine the relationship between body perceptions and depression among African American and European American women ages 65 and older. Based on previous research, it is hypothesized that positive body perceptions will be associated with lower levels of depression. Additionally, the relationship between social engagement (among European American women), social support (among African American women), and depression will be assessed, and social engagement will be examined as a potential mediator of the relationship between body perceptions and depression (See Figure 1).

CHAPTER III

METHODS AND RESULTS

Overview

This dissertation presents three studies, all drawing on data collected through surveys administered to two samples of women aged 65 and older. One sample included African American women aged 65 to 96 (76.13 years, $SD = 6.80$), and the other included European American women aged 65 to 99 (81.47 years, $SD = 7.57$). These data were collected from two different subject pools. Data were collected between 2008 and 2010.

Because little is known about body satisfaction among older women, Study 1 explored how women in the two ethnic groups rated themselves in terms of satisfaction with particular aspects of the body, as well as the importance they attributed to these bodily features. Differences at the item level were assessed to observe how patterns were both similar and different between the two ethnic groups. Subscales were identified using weighted body satisfaction x importance items to be used in subsequent analyses using an exploratory factor analysis. To determine whether the factor structure differed significantly between the two ethnic groups confirmatory factor analysis was employed.

The purpose of Study 2 was to examine the associations between the two body perception subscales identified in study 1, and variables conceptualized as predictors of body satisfaction: femininity, social comparison, and subjective age. Study 3 examined the association between the body perception subscales and depression, conceptualized as a consequence of body attitudes.

Analyses for study 1 included data on body satisfaction items common to both groups. Analyses for studies 2 and 3 were run separately by ethnic group, as not all measures were common to both groups.

STUDY 1: PATTERNS OF BODY SATISFACTION AND IMPORTANCE AMONG AGING AFRICAN AMERICAN AND EUROPEAN AMERICAN WOMEN

Patterns of body satisfaction among college-age women have indicated that there are significant differences among African American and European American women, and that African American women are, on average, more satisfied with their bodies (Altabe, 1998; Roberts, Cash, Feingold, & Johnson, 2006). However, this work has not been extended to examine these patterns among older women (Peat, Peyerl, & Muhlenkamp, 2008). Research on body image among aging women has suggested that patterns of body concern may be different for older women than for younger women (Montepare, 2006; Tiggemann & Lynch, 2001; Webster and Tiggemann, 2003), and the aspects of body satisfaction most important to older women need to be examined. Feelings about age may also affect how women evaluate the importance of and satisfaction with various aspects of their bodies (Hurd, 2000). Specifically, subjective (or felt) age has been associated with perceived physical age, (Kleinspehn-Ammerlahn, Kotter-Gruhn, & Smith, 2008). However, researchers have yet to examine the direction or strength of the relationship between subjective age and different dimensions of older women's body satisfaction.

The purpose of this study was to evaluate differences and similarities among African American and European American women's experiences of body satisfaction and the importance placed on body features. In order to identify different dimensions of body image among older women, this study included a factor analysis of weighted body satisfaction scores (satisfaction x

importance). Confirmatory factor analysis was utilized to examine whether this factor solution was appropriate for both ethnic groups. Based on this analysis, subscale scores representing 2 aspects of body satisfaction—bodily function and appearance and cosmetic appearance—were created. Additionally, I examined correlations between body mass index, subjective age, and the body perception subscales, as well as comparisons between African American and European American women on their scores. Finally, I discussed broad patterns that emerged from the analyses.

Method

Sample and Participant Recruitment

Data were collected from 132 European American and 125 African American women. European American participants were recruited in three ways for this study. The first involved flyers posted at senior residential communities within 5 miles of the University. Participants responded to the flyers by calling or emailing the researchers, and a meeting time was arranged to drop off and pick up the survey. The second recruitment strategy involved mailing information about the study to individuals who had opted to be on a list of possible participants for research studies maintained by the Institute of Gerontology at the University of Michigan. After receiving an initial letter through the mail describing the study, follow up phone calls determined which individuals would like to participate. Those that opted in were sent the survey, which they filled out and returned by mail. All participants were compensated fifteen dollars for completing the survey. In each sampling method, participants read and signed consent forms prior to participation, completed the survey, and received payment and a debriefing and thank you letter.

Because the first two recruitment strategies yielded no responses from African American women, a third strategy was employed to tap this population. Contact information for possible

participants, including address and phone number, was obtained from the Healthier Black Elders Center, which is run and maintained by the Institute of Gerontology at Wayne State University. The center provided a list of potential participants who met our criteria of being over the age of 65 and female, and all women on the list were sent a packet in the mail containing an introductory letter that provided background information about the study, as well as the consent forms, questionnaire, and a return envelope. Next, women were contacted by phone to ask if they had any questions regarding the study, and to see if they would be willing to participate. When the questionnaire and consent form were returned, participants were sent a fifteen dollar payment. Details about the scales included in the questionnaires appear below.

Several demographic differences between the samples were found (see Table 3.1). The average age for the European American women (81.47 years, $SD = 7.57$) was significantly higher than the average age for the African American women (76.13 years, $SD = 6.80$; $t(244) = 7.26, p < .001$). European American women reported, on average, completing higher levels of education than African American women ($t(244) = 3.36, p < .01$). On average, European American women indicated attending or graduating from college ($M = 5.69, SD = 1.92$), and African American participants reported, on average, attending some college ($M = 4.88; SD = 1.83$). It is important to note that this sample is more highly educated than the national average. Census data indicated that for White adults over the age of 65, 38.6% were high school grads, 18.9% attended some college, and 18.6% held a bachelors degree or higher. For Black adults over the age of 65, 27.4% were high school grads, 13.9% attended some college, and 10.2% held a bachelors degree or higher. On average, men in this age range are more highly educated than are women: only 13.4% of women over 65 have a bachelors degree or higher, whereas 22.9% of

men in the same age group have attained this level of education (He, Sengupta, Velkoff, & DeBarros, 2005).

There were not significant differences between the groups in terms of their partner status ($\chi^2 (249) = 6.25, p = .40$). African American women reported raising more children, on average, than did European American women ($t (238) = 2.00; p < .05$). Last, body mass index (BMI), which is calculated by multiplying weight in pounds by 703 and dividing by height in inches squared, was assessed using a modified version of a BMI table created by the Centers for Disease Control and Prevention (Centers for Disease Control and Prevention, 1998). Participants were asked to find their height and corresponding weight range and to circle this value in the table. BMI is a commonly used index that classifies adults as underweight (< 18.5), normal weight (18.5-24.99) overweight (25-29.99), and obese (> 30) (World Health Organization, 2009). For this study, a score of 1 corresponds to underweight, 2 = normal weight, 3 = overweight, 4 = moderately obese, and 5 = severely obese. African American women ($M = 3.33, SD = .93$) reported a higher average BMI than did European American women ($M = 2.78, SD = 1.00 ; t (234) = 4.34; p < .001$).

Table 3.1

Demographic Information for African American and European American Women

Variable	African American	European American
Highest Level of Education		
High School	31.1%	27.6%
College	50.4%	34.6%
Postgraduate Degree	37.8%	37.8%
Partner Status		
Single	5.0%	8.7%
Married or Partnered	20.8%	28.3%
Separated or Divorced	22.5%	16.5%
Widowed	51.7%	44.9%
Average Number of Children Raised		
	3.52	2.98
Body Mass Index Category		
Underweight	—	4%
Normal Weight	18.8%	41.9%
Overweight	42.9%	34.7%
Obese	38.4%	19.4%

Measures

Surveys were printed in booklet form and were printed on 8 ½ by 11 inch paper. All text was formatted in 18 point, times new roman font. Although this increased the number of pages in

the survey, the large type was used to ensure that participants would be able to easily read all questions.

Body Satisfaction and Importance. The Body Perceptions Scale is an adaptation of the Body Image Ideals Questionnaire (Cash & Szymanski, 1995). Items have been modified from the original measure to ask participants how satisfied they are with a particular body feature, and how important that feature is to them. The original measure asks about how discrepant the actual body part is from the ideal, such as facial features and body proportions, and the importance of each body part. Rather than asking older women about how discrepant they are from their ideal, I modified these questions to ask directly about their level of satisfaction with each aspect of the body. I did so because it is possible that a woman may feel that some aspect of her body does not match the imagined ideal, yet she may still feel satisfied with this aspect of her body.

In order to ensure this scale addressed aspects of the body that might be particularly relevant to aging women, we added several original items. Rather than asking one question about hair we asked three separate questions about hair color, texture, and thickness. We added three questions to measure satisfaction and importance of firmness of facial skin, firmness of skin on one's body, and bust. The scale as we administered it contains 30 items that are rated on a scale ranging from 1 (not important) to 4 (very important); participants are then asked to rate the same 30 items again on a scale ranging from 1 (not very satisfied) to 4 (very satisfied). Higher scores reflect greater importance and satisfaction.

To create a weighted body satisfaction measure, that is, a product of the body satisfaction and importance responses for a particular aspect of the body, the scoring system created by Cash and Szymanski (1995) was used. For each question, participants were asked to rate their level of satisfaction with particular aspects of the body. These scores were recoded to reflect the

following values: -1 (very dissatisfied), +1 (somewhat dissatisfied), +2 (somewhat satisfied), +3 (very satisfied). Importance scores were recoded as follows: 0 (not important), 1 (somewhat important), 2 (moderately important), 3 (very important).

Next, the importance score and satisfaction score for each item were multiplied together, creating a weighted satisfaction score. This was done so that any item with low importance was weighted less than those with a high level of importance. Cash and Szymanski (1995) explained that recoding the items using this system allows for any item that receives an importance score of 0 to also receive a cross-product of 0. Additionally, assigning a -1 to items with the greatest dissatisfaction creates continuity of the weighted satisfaction score from very important and dissatisfied to very important and very satisfied. Weighted satisfaction items ranged from -3 (a product of very important (3) and very dissatisfied (-1), reflecting a high level of importance and dissatisfaction), to 9 (a product of very important (3) and very satisfied (3), reflecting a high level of importance and satisfaction). The final scale thus has a possible range of -3 to 9. Higher scores reflect greater satisfaction weighted by importance, and lower scores reflect greater dissatisfaction weighted by importance (see tables 3.3 and 3.4). Any item that was rated as unimportant received a score of 0.

Body Mass Index. Participants were asked to circle their height and weight in a table used to assess body mass index (BMI). BMI is a commonly used index that classifies adults as underweight (< 18.5), normal weight (18.5-24.99) overweight (25-29.99), and obese (> 30) (World Health Organization, 2009).

Subjective Age. Subjective age was measured using one item asking women the age they feel. This was an open-ended question and participants were instructed to write their answer in

the space provided. Allowing participants to specify an age provides a continuous scale that does not rely on pre-set categories and allows for greater variance (Kaufman & Elder, 2002).

Results

General Body Satisfaction and Importance Trends

Overall, women in both ethnic groups scored higher on satisfaction with items on the cosmetic appearance subscale than items on the bodily function and appearance subscale. However, in general women in both ethnic groups rated cosmetic appearance features as less important overall than bodily function and appearance. That is, overall women rated aspects of cosmetic appearance as holding less importance yet more satisfaction, whereas aspects of bodily function and appearance were rated as holding more importance yet less satisfaction.

Comparing African American and European American Women on Body Satisfaction and Importance

Mean scores on the satisfaction, importance, and weighted satisfaction items were compared between the two ethnic groups (see Tables 3.2 and 3.3). T-tests comparing the groups were performed to assess significant group differences. To control for the number of tests performed, a Bonferonni correction was used on the alpha level needed to reach significance. To do so, the alpha level (.05) was divided by the number of comparisons being made (36), which determined a new alpha level of $p < .001$ that must be met to reach significance.

Given the range of possible scores for the satisfaction and importance measures (from one to four), the women in both ethnic groups scores reflect a relatively high level of satisfaction with the body. Overall, the pattern of findings suggested that the African American women in this sample were significantly more satisfied with a range of aspects of the body. In particular, African American women's average responses indicated higher levels of satisfaction with both

cosmetic appearance and bodily function and appearance items, including skin complexion, hair texture, facial features, physical strength, and overall physical appearance. The effect sizes for satisfaction with skin complexion, muscle tone and definition, overall physical appearance, and facial features were medium. European American women did not rate themselves as more satisfied on average than African American women on any items.

African American women rated a number of items as more important than did European American women, and all of these items came from the bodily function and appearance subscale. These items included weight, physical strength, firmness of skin on the body, and overall physical appearance. The mean difference in muscle tone and definition was a medium effect, and weight and firmness of skin on the body were large effects. The mean difference on overall physical appearance was a small effect.

Last, the weighted satisfaction scores represent a combination of the satisfaction and importance scores, and there were a number of significant group differences on this measure. Again, African American women's scores were higher on average than the scores of European American women. African American women scored significantly higher on weighted satisfaction with skin complexion, facial features, physical strength, firmness of skin on the body, and overall physical appearance. Again, most of these effects were small, however muscle tone and definition approached a medium effect size, and physical appearance was a medium effect size.

Table 3.2
Ethnic Comparisons for Body Satisfaction, Importance, and Weighted Satisfaction Items on the Cosmetic Appearance Subscale

Item	<i>European Americans</i> <i>M (SD)</i>	<i>African Americans</i> <i>M (SD)</i>	<i>t</i>	<i>d</i>
Height				
Satisfaction	3.36 (.92)	3.50 (.79)	1.30	.07
Importance	2.21 (.94)	2.45 (1.12)	1.82	.16
Weighted Satisfaction	2.68 (2.88)	3.45 (3.36)	1.93	.12
Skin Complexion				
Satisfaction	3.03 (.84)	3.71 (.63)	7.12*	.42
Importance	2.70 (.88)	2.83 (1.23)	.98	.06
Weighted Satisfaction	3.46 (2.83)	4.88 (3.73)	3.38*	.21
Hair Texture				
Satisfaction	2.79 (1.05)	3.21 (.94)	3.32*	.21
Importance	2.61 (.93)	2.88 (1.07)	2.05	.13
Weighted Satisfaction	2.74 (3.05)	3.98 (3.47)	2.99	.19
Hair Thickness				
Satisfaction	2.46 (1.13)	2.77 (1.07)	2.05	.14
Importance	2.70 (.91)	3.00 (1.00)	2.46	.15
Weighted Satisfaction	2.08 (3.28)	3.01 (3.72)	2.08	.13
Hair Color				
Satisfaction	3.17 (.98)	3.42 (.92)	2.07	.13
Importance	2.53 (.97)	2.81 (1.20)	2.02	.13
Weighted Satisfaction	3.24 (3.00)	4.16 (3.97)	2.05	.13
Facial Features				
Satisfaction	3.01 (.79)	3.59 (.69)	6.07*	.36
Importance	2.71 (.85)	2.95 (1.13)	1.85	.12
Weighted Satisfaction	3.33 (2.61)	5.02 (3.52)	4.29*	.26

Note. * $p < .001$.

Table 3.3
Ethnic Comparisons for Body Satisfaction, Importance, and Weighted Satisfaction Items on the Bodily Function and Appearance Subscale

Item	<i>European Americans</i> <i>M (SD)</i>	<i>African Americans</i> <i>M (SD)</i>	<i>t</i>	<i>d</i>
Muscle Tone and Definition				
Satisfaction	2.32 (.89)	2.66 (.96)	2.89	.37
Importance	2.94 (.72)	3.21 (.92)	2.57	.33
Weighted Satisfaction	2.22 (2.96)	3.19 (3.64)	2.30	.29
Weight				
Satisfaction	2.44 (1.18)	2.33 (1.21)	-.73	.09
Importance	3.14 (.78)	3.61 (.64)	5.19*	.66
Weighted Satisfaction	2.50 (3.92)	2.45 (4.59)	-.09	.01
Physical Strength				
Satisfaction	2.26 (.97)	2.72 (.91)	3.86*	.24
Importance	3.10 (.72)	3.47 (.74)	3.98*	.25
Weighted Satisfaction	2.22 (3.25)	4.06 (3.46)	4.28*	.26
Physical Coordination				
Satisfaction	2.61 (1.01)	2.79 (.92)	1.47	.11
Importance	3.37 (.74)	3.63 (.61)	3.03	.19
Weighted Satisfaction	3.53 (3.70)	4.55 (3.48)	2.22	.14
Firmness of Skin on Body				
Satisfaction	2.28 (.91)	2.57 (1.01)	2.33	.15
Importance	2.47 (.84)	3.31 (.82)	7.90*	.45
Weighted Satisfaction	1.62 (2.54)	3.17 (3.58)	3.92*	.24
Physical Appearance				
Satisfaction	2.68 (.83)	3.19 (.79)	4.86*	.30
Importance	3.10 (.73)	3.53 (.69)	4.73*	.29
Weighted Satisfaction	3.35 (2.83)	5.60 (2.96)	6.04*	.36

Note. * $p < .001$.

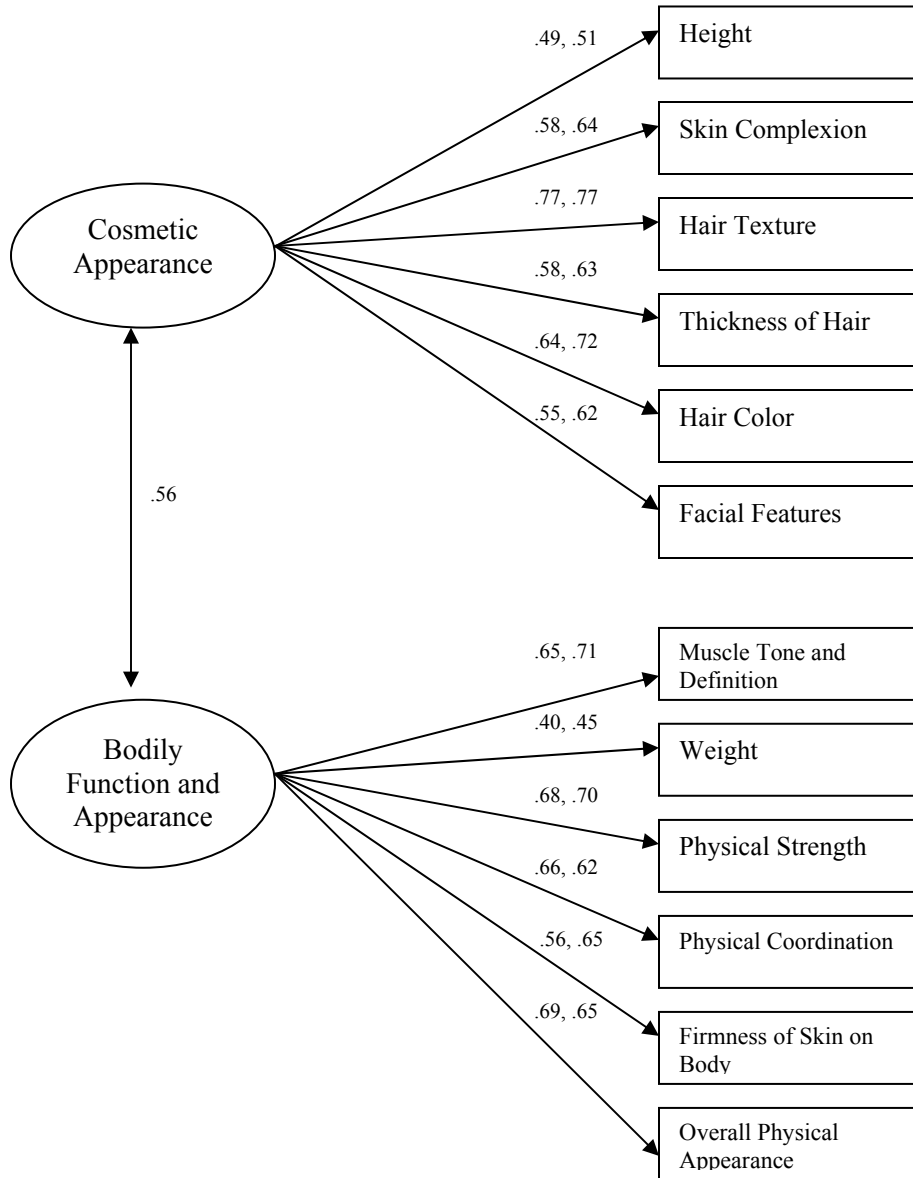
Creating Body Satisfaction Subscales

First, the weighted body satisfaction items were factor analyzed to create subscales reflecting different aspects of body satisfaction among older women. As noted by Jefferson and Stake (2009), the original Cash and Szymanski (1995) measure provided no formal scoring system for creating subscale scores. In order to examine patterns of body satisfaction for African American and European American women, meaningful categories of body satisfaction needed to be established. To do so, a principal components factor analysis was performed for all participants using the weighted body satisfaction scores. The results of an initial analysis suggested a three-factor solution; however, an examination of the scree plot indicated that a 2 factor solution may be more appropriate. Furthermore, the eigenvalue for the third factor (1.072) was just over the cutoff value of 1, and the third factor only explained a small percentage of the variance (7.15 %) and this solution was not clearly interpretable.

A second factor analysis was conducted wherein a 2 factor solution was specified. The results indicated that the items grouped together into 2 distinct factors—one that contained items related primarily to cosmetic aspects of appearance (skin complexion, hair texture, thickness of hair, hair color, facial features, height), and one that contained items primarily related to bodily function and appearance (muscle tone and definition, weight, physical strength, physical coordination, firmness of skin on body, overall physical appearance). The first factor was labeled *cosmetic appearance subscale*, and the second factor was labeled *bodily function and appearance subscale*. Three items (body proportions, bust, and firmness of facial skin) loaded on both factors, and were subsequently dropped from the analyses.

Figure 3.1

Factorial Structure Factor Loadings for Weighted Body Satisfaction Items



Note. Factor loadings for African American women are before the comma, and factor loadings for European American women are after the comma. All factor loadings and covariance are significant at the $p < .05$ level.

Testing for Factorial Invariance

Next, the factor structure was assessed using confirmatory factor analysis (see Figure 3.1). Confirmatory factor analysis allows for the comparison of the fit of the hypothesized factor

structure for two groups. An important assumption in multi-group comparisons is that the measure being assessed is factorially invariant between the two groups (Byrne, Baron & Campbell, 1993). If members of different groups ascribe the same meanings to items on a survey, the factor loadings for these groups are roughly equivalent with respect to the underlying constructs, and factorial invariance is present (Cheung & Rensvold, 1999). If factorial invariance is not present, Byrne, Shavelson, and Muthen (1989) outline steps for testing for partial factorial invariance, which involves identifying which items are invariant so that a decision can be made about how to proceed in analyzing the data. If partial factorial invariance is found, researchers “can delete non-invariant items, utilize partial factorial invariance to retain them, or interpret them as cross-cultural data in their own right” (Cheung & Rensvold, 1999, p. 2).

The first step in testing for factorial invariance is establishing a baseline model that is estimated separately for each group (Byrne, Shavelson, & Muthen, 1989). A baseline model is the most parsimonious and best fitting model that represents the observed data (Byrne, Baron, & Campbell, 1993). I tested the fit of the two-factor model obtained in the first step of the analyses using EQS version 6.1 (Bentler, 1995). Although the χ^2 for this model was significant [$\chi^2(106) = 175.64, p < .001$], as Weston and Gore (2006) explained, the χ^2 measure is limited because of its dependency on sample size, and a nonsignificant χ^2 may be unlikely, even when the model may be a close fit to the data. Researchers have suggested that examining other fit indices give a more practical assessment of the fit of the model (Byrne, Baron, & Campbell, 1993; Weston & Gore, 2006). In order to evaluate the fit of the model, I followed the recommendations to report the χ^2 statistic (including degrees of freedom and significance level), the root mean square error of approximation (RMSEA) with 90% confidence interval (CI), the standardized root-mean-square residual (SRMR), and the comparative fit index (CFI); (Kline, 2005). For sample sizes of less

than 500, RMSEA and SRMR values of less than .10 and CFI values greater than .90 suggest that the data provide an acceptable fit to the model (Weston & Gore, 2006). Based on the aforementioned criteria, the fit indices for the baseline model (RMSEA = .074, CI = .054, .093; SRMR = .070; CFI = .912) suggest that the model is an acceptable fit for the data.

At the next step, all factor loadings, factor variances, and factor covariances were constrained to be equal across both groups [$\chi^2 (119) = 201.20, p < .001$]. The χ^2 fit statistic for the two models is then compared, and if the change in χ^2 between the two models is significant, then the unconstrained baseline model fits the data better than the constrained model, demonstrating that the constrained model could be improved by relaxing one or more of the constraints, and factorial invariance does not exist (Cheung & Rensvold, 1999). The difference between the χ^2 values was 25.56 with 13 degrees of freedom. The critical value of χ^2 with 13 degrees of freedom at $p = .05$ is 22.36. Thus, the change in χ^2 is greater than the critical value and is significant.

The next step is to test for partial factorial invariance by identifying the part or parts of the model that are not factorially invariant. To do so, each of the constructs in the model is examined for invariance. A separate model is estimated for each construct, and factor loadings associated with the construct are constrained to be equal across groups, while the loadings for the other factor are unconstrained. The χ^2 fit statistic for each model is compared to the χ^2 from the baseline model, and if the χ^2 for a particular construct is significant, then at least one of the items within the construct is non-invariant (Cheung & Rensvold, 1999). Once the non-invariant factor is identified, the procedure is repeated and a series of tests is performed and a separate model is estimated for each item, wherein that item's loading is constrained to be equal across groups, and all other loadings are unconstrained (Byrne et. al., 1989). As in previous tests, the χ^2 for the

constrained model is compared to the χ^2 of the baseline model, and a significant χ^2 indicates that an item is non-invariant (Cheung & Rensvold, 1999).

Following this procedure, I tested the first factor (cosmetic appearance) for non-invariance. As seen in table 3.4, the change in χ^2 was significant for this factor, indicating that this is one source of non-invariance. Next, a test of the second factor (bodily function and appearance) revealed a non-significant change in χ^2 , indicating that this factor is invariant. To follow up and identify which of the items in factor 1 contributed to non-invariance, separate models for each item were tested. Unexpectedly, none of the individual items showed a large enough change in χ^2 to reach significance. This may be because the change in χ^2 for the factor overall just reached significance at the $p < .05$ level, and none of the items alone accounted for the non-invariance. Given that none of the items individually proved to be non-invariant, and that the change in χ^2 between the model constraining factor 1 and unconstrained model had just reached significance ($p = .04$), no items were dropped from the original 2 factor solution, and this solution appears to adequately explain the experience of body satisfaction for both African American and European American women.

Subscale scores were calculated by taking the mean of all items on the subscale. The cosmetic appearance subscale contains 6 weighted items, including hair texture, skin complexion, hair color, facial features, height, and thickness of hair. The alpha for this subscale was .80. The bodily function and appearance subscale also contains 6 items, including muscle tone and definition, weight, physical strength, physical coordination, firmness of skin on body, and overall physical appearance. The alpha for this subscale was .79.

Table 3.4

Tests of Invariance for Body Satisfaction Measurements

Model	χ^2	<i>df</i>	$\Delta\chi^2$	Δdf	<i>P</i>
1. Baseline model (unconstrained)	175.64	106	—	—	—
2. Fully constrained model	201.20	119	25.56	13	.02
3. Factor 1 constrained	188.59	112	12.95	6	.04
4. Factor 2 constrained	185.19	112	9.55	6	.14
5. Model with height constrained	175.64	107	.003	1	.96
6. Model with skin complexion constrained	175.64	107	.002	1	.96
7. Model with hair texture constrained	176.59	107	.95	1	.33
8. Model with thickness of hair constrained	177.31	107	1.67	1	.20
9. Model with hair color constrained	175.66	107	.02	1	.89
10. Model with facial features constrained	175.75	107	.11	1	.74

Note. $\Delta\chi^2$ and Δdf as compared to baseline model. *p* represents significance of $\Delta\chi^2$.

Examining Patterns among Body Satisfaction and Demographic Variables

Correlations for the cosmetic appearance and bodily function and appearance subscales and all other variables were examined separately by ethnic group, controlling for age (see Table 3.5). Based upon Cohen's effect size guidelines (1988) (small effects $r = .10$, for medium effects, $r = .30$, and for large effects, $r = .50$) the significant correlations in this study fall primarily in the range between medium to large effects.

For both groups, partial correlations controlling for age showed a significant positive relationship between perceptions of cosmetic appearance and perceptions of bodily function and appearance. For both African American and European American women higher positive perceptions with bodily function and appearance were associated with lower BMI. Subjective age was significantly negatively correlated with perceptions of bodily function and appearance

for both groups. Subjective age was not significantly related to perceptions of cosmetic appearance for either group, though both of these associations were negative.

For African American women, the relationship between BMI and subjective age was a positive trend, but for European American women this relationship was non-significant (and close to zero). For African American women, there was a significant negative association between perceptions of cosmetic appearance and BMI; however for European American women, this association was non-significant and negative.

Table 3.5

Partial Correlations between Body Perception Subscales, BMI, and Subjective Age for African American women (above diagonal) and European American women (below diagonal) Controlling for Age

Variable	1	2	3	4
1. Cosmetic appearance subscale	—	.38***	-.24*	-.11
2. Bodily function and appearance subscale	.49***	—	-.43***	-.23*
3. BMI	-.06	-.27**	—	.19 [†]
4. Subjective age	-.10	-.28**	.02	—

Note. [†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Next, the association between demographic variables and body perception subscales were examined (See Tables 3.6 and 3.7). Regression analyses indicated that for African American women, BMI had a negative association with perceptions of bodily function and appearance, and age and number of children raised had a positive association. For European American women, only BMI was associated with this subscale. Regression analyses indicated that for the cosmetic appearance subscale, for African American women BMI was the only significantly associated variable, and the R-squared for European American women was not significant.

Table 3.6

Regression Analysis Summary for Demographic Variables Predicting Satisfaction with Perceptions of Bodily Function and Appearance

Variable	African American			European American		
	<i>B</i>	<i>SEB</i>	β	<i>B</i>	<i>SEB</i>	<i>B</i>
BMI	-.13	.24	-.46***	-.66	.20	-.31**
Age	.08	.04	.21*	-.03	.03	-.09
Education	.18	.12	.13	-.01	.10	-.01
Partner Status	-.40	.25	-.14	.23	.19	.12
Children Raised	1.88	.76	.21*	-.48	.60	-.07

Note. For African American women, $R^2 = .31$ ***. For European American women, $R^2 = .10$ *. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3.7

Regression Analysis Summary for Demographic Variables Predicting Satisfaction with Perceptions of Cosmetic Appearance

Variable	African American			European American		
	<i>B</i>	<i>SEB</i>	β	<i>B</i>	<i>SEB</i>	<i>B</i>
BMI			-			
	-.71	.28	.24**	-.05	.19	-.03
Age	.06	.04	.14	.00	.03	-.01
Education	.03	.14	.02	.02	.09	.02
Partner Status	.03	.29	.01	-.91	.18	-.10
Children Raised	-1.25	.89	-.13	-1.21	.57	-.19*

Note. For African American women, $R^2 = .11$ *. For European American women, $R^2 = .06$ *. * $p < .05$. ** $p < .01$. *** $p < .001$.

Discussion of the Results for Study 1

African American women, on average, showed higher levels of both satisfaction and importance with various aspects of the body compared to European American women. African American women's average responses indicated higher levels of satisfaction with both cosmetic appearance and bodily function and appearance items, including skin complexion, hair texture, facial features, physical strength, and overall physical appearance. Like younger African American women, this pattern indicated that older African American women show greater body satisfaction than do European American women (Altabe, 1998; Roberts, Cash, Feingold, & Johnson, 2006). Interestingly, African American women were more satisfied on all items assessing hair. African American women have complex attitudes about hair (Craig, 2006; Rubin, Fitts, & Becker, 2003), and the assumption that European American women would be more satisfied with this aspect of appearance was not upheld. This unexpected finding raised the question of which ethnic group AA women in this study were using as the reference group when they responded to these items.

I hypothesized that European American women would rate different aspects of the body higher on importance, because younger European American women often place greater importance on appearance and body features (Rucker and Cash, 1992; Sanchez & Crocker, 2005). However, this hypothesis was not supported. African American women may place more importance on aspects of the body that they are satisfied with because they are optimizing areas that are associated with positive perceptions. This psychological strategy is in keeping with Baltes and Baltes' (1990) theory that older adults emphasize areas associated with success and positive experiences. Overall, African American women's weighted body satisfaction scores either did not differ from or were significantly higher than those reported by European American

women. It is possible that African American women are choosing to place more importance on body features with which they feel moderately to highly satisfied.

A factor analysis of weighted body satisfaction items (satisfaction x importance) revealed a 2-factor solution that was invariant across both samples. These factors included perceptions of cosmetic appearance and perceptions of bodily function and appearance, both of which are centrally important to aging women (Hurd, 2000). This is the first quantitative exploration of dimensions of body satisfaction and importance among older women, and these findings differ from those among younger women. Using Cash and Szymanski's (1995) original BIQ questionnaire, Jefferson and Stake (2009) found three distinct factors among college age African American and European American women—specific appearance features (including hair texture and thickness, skin color, various facial features, and chest size), functional body characteristics (including physical strength and coordination), and weight related features (including body proportions, muscle tone and definition, and weight). In contrast, the analyses in this study showed that the items Jefferson and Stake (2009) grouped into the weight related features were more closely associated with bodily function and appearance for older women.

Among young adult women body attitudes have been bifurcated into constructs that have been termed “body as object” and body as process” (Franzoi, 1995). Body as object emphasizes focusing on appearance and external, physical attributes. Body as process invokes a focus on the functionality of the body, and emphasizes physicality and ability over exercise. Similarly, objectification theory (Fredrickson & Roberts, 1997) explained that women in western culture often internalize an outsider's perspective on their bodies, leading them to self-objectify. When women self-objectify, they lose touch with their internal bodily states, and consequently focus attention on aspects of appearance rather than on the functionality of the body. Women who are

in a state of self-objectification perform worse on cognitive tasks because being in a heightened state of bodily awareness diverts attention away from cognitive performance (Quinn, Kellen, Twenge, & Fredrickson, 2006; Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998). Only recently has the literature on self-objectification expanded to consider the experiences of women at midlife (Augustus-Horvath & Tylka, 2009), and found that although the same model fit the data for women at midlife, the relationships between the variables vary for older women, such that women at midlife had a stronger association between body shame and disordered eating, but a weaker relationship between poor introspective awareness and disordered eating than did college-age women. This pattern of body perceptions had not previously been examined among older women. Although older women express concern with the function of their bodies as they age, many continue to express an internalization of ageist beauty norms (Hurd, 2000).

The 2 factor solution found in this study is in keeping with previous qualitative research examining body image among older women; Hurd (2000) conducted interviews with White women ages 62 to 91 and found that although women reported a concern with changes in appearance, they also focused on health and the maintenance of bodily functioning. The women reported concerns about weight, and Hurd (2000) indicated that for older women, a focus on weight is in accordance with the shift from appearance orientation to health orientation. Although satisfaction with weight may be more relevant in the domain of appearance for younger women, a different pattern emerged here, as weight grouped together with items assessing satisfaction with bodily function and appearance, indicating that for older women, weight may be more closely associated with body function rather than cosmetic appearance. Additionally, overall physical appearance grouped together with items assessing aspects of bodily function, rather than cosmetic appearance. This may be because this item included the

word “physical,” and indicated that this is a whole body assessment. For older women, overall appearance may reflect the degree to which one is physically capable, and this item grouped on the bodily function and appearance subscale.

It is important to note that the body satisfaction subscales were created using weighted satisfaction items, that is, items that were created by transforming satisfaction and importance scores into one variable. Weighted scores reflect the level of satisfaction accounting for the degree to which each body characteristic is important to a participant. Every body feature that was rated as not important received a score of zero, and when multiplied by the satisfaction score, these items were no longer influencing the patterns observed using this measure. This calculation focuses the satisfaction scores on items that women value as being important to them. Therefore, this score reflects a psychological measure of body attitudes, and indicates how satisfied women are with aspects of the body that are important to them.

This approach to the analyses provides information about which aspects of the body women value most highly, and may provide more information about how women are valuing and evaluating their bodies. Baltes and Baltes (1990) theory of selective optimization and compensation may support the interpretation of this data, as aspects of the body that women find most important and are most satisfied with, because these may reflect aspects of the body that are being selectively optimized. A woman who rates high on a weighted measure of either cosmetic appearance features or bodily function and appearance measures indicates that this woman is both highly satisfied and these items are very important. Selective optimization and compensation theory indicates that older adults choose to focus on areas that are important to them and in which they feel they are able to maximize their potential. By combining satisfaction

and importance information, this measure is able to reflect the level of satisfaction that women feel with the aspects of the body that are most important to them.

A test of factorial invariance revealed that this factor structure was acceptable for both ethnic groups. Although the fit of the constrained model was marginally significant and not as good a fit as the unconstrained model, a test for partial factorial invariance showed that no subscale or individual item accounted for the change in fit. To examine the source of partial factorial invariance, it is suggested that researchers assess which items are the source of invariance and then make a decision about how to proceed based on both the number of invariant items as well as what the items are (Byrne, Shavelson, & Muthen, 1989). Previously, some researchers have left the invariant items in their model, and have allowed those items to be unconstrained when estimating their models (Byrne, Shavelson, & Muthen, 1989). In the current study, no individual items were identified as being invariant, therefore no further steps were necessary.

Additionally, the significant change in chi-square between the unconstrained and constrained model had just reached significance (that is, it was significant at the $\alpha = .05$ level, but not at the $\alpha = .01$ level). Some researchers (e.g., Cheung & Rensvold, 1999) have used an alpha level of .01 in assessing the significance in change of the fit of the model, and also have recommended using a Bonferonni correction when testing multiple models for partial factorial invariance. Were I to divide the alpha level used in this study (.05) by the number of models estimated to test for partial invariance (9), I would have a new alpha of .006. This would provide a more stringent test of significance, and were I to use this alpha to assess significance, the initial difference in chi-square between the constrained and unconstrained models would no longer be considered significant. Performing these tests gave a more in-depth examination of the

factor structure of the measure, as well as a test of the appropriateness of using this factor solution for both ethnic groups. After performing the series of tests examining partial factorial invariance, I concluded that the differences between the groups were minimal, and individual items were not invariant. As a result, moving forward with the analyses the same subscales (appearance and function) were used for both groups.

Testing for factorial invariance between the two ethnic groups provides information about how different aspects of the body group together for women in these groups. This analysis showed that there were not significant differences between the groups, indicating that the relationships between these items were similar for both African American and European American women. In particular, for both groups a pattern of cosmetic appearance related items and bodily function and appearance related items represented the data. This similarity between ethnic groups is notable, because it suggests that as women age, there may be some similarity in the aspects of body perceptions that are related. Unlike college-age women in different ethnic groups, for whom aspects of the body are differentially important (Poran, 2006), for older women age related bodily changes may be more salient.

A general pattern emerged that showed women rated bodily function and appearance as having greater importance yet lower levels of satisfaction. This finding reflects that aspects of the body most meaningful to older women may center around the capabilities of the body, as well as the appearance of bodily fitness. Aspects of cosmetic appearance were less important, supporting the idea that older women care less about external, cosmetic features. This may be because what the body is able to do, rather than how the body looks, may take precedence for older women.

An examination of the correlations run separately by ethnic group showed a significant positive relationship between perceptions of cosmetic appearance and perceptions of bodily function and appearance for both African American and European American women. Subscales from the same measure are often correlated, as overall positive or negative feelings about the body may affect both of these domains. Additionally, for both groups higher satisfaction with important aspects of bodily function and appearance were associated with lower BMI. Higher BMI has been associated with decreases in overall health and development of physical difficulties among adults at late middle age (He & Baker, 2004), and older women who are hindered by body size may experience limited functionality and/or other physical limitations related to weight. It is possible that physical limitations and/or health issues associated with overweight status may affect the satisfaction women feel with their physical functioning. Women who are less active may be more likely to have a high BMI, and may also feel less satisfied with aspects of the body that represent function and ability and the overall appearance of the body. This is an important relationship to consider for older women, because continued functionality of the body may also be tied to other important outcomes, such as positive feelings about aging and lower levels of depression.

For African American women, BMI was negatively related to perceptions of cosmetic appearance, indicating that women with higher BMI were less satisfied with important aspects of cosmetic appearance. For African American women, BMI was positively related to subjective age, meaning that those that felt older, on average, also had a higher BMI. Neither of these associations were significant for the European American women, which may indicate that body size plays a more important role for older African American women. This pattern differs from that observed among younger women, as weight has been conceptualized as one important

component of body image for European American women, and African American women tend to reject the thin ideal (Craig, 2006; Lovejoy, 2001; Ofusu et al., 1998). The significant association between BMI and subjective age also showed that weight may be one factor that affects perceptions of age for women in this ethnic group.

Subjective age was significantly negatively correlated with perceptions of bodily function and appearance for both ethnic groups. This indicates that women that are more satisfied with functional aspects of the body that were also rated as important also report feeling younger. This is an interesting association, as it examined two psychological aspects of aging—feelings about one's own age (i.e., feeling younger or older than chronological age) and feelings about bodily function and aspects of appearance related to the overall appearance of the fitness of the body. This pattern of association is not unexpected, as it is likely that older women who feel they are physically functioning well and are satisfied with their overall physical appearance also feel younger; although it was beyond the scope of this data collection, measures of objective physical ability and presence of age related illness may contribute to this association. Future research should address if the relationship between subjective age and satisfaction with body function is driven by objective physical changes related to age.

For African American women, but not for European American women, higher satisfaction with important aspects of cosmetic appearance was significantly related to lower BMI. This pattern is different from research demonstrating that there is a significant relationship between feelings about weight, appearance, and self worth for younger European American women (Sabik, Cole, & Ward, 2010; Sanchez & Crocker, 2005; Evans, 2003). The lack of a significant relationship between these variables for European American participants indicates that body size is less relevant to satisfaction with appearance features that were rated as

important. Unexpectedly, this association is significant for older African American women, raising the question about the meaning of weight for older African American women. A handful of studies on younger African American women have questioned whether this group is uniformly protected from body dissatisfaction (Poran, 2006; Sabik, Cole, & Ward, 2010), and this finding provides evidence that for older African American women body size (i.e., BMI) may factor in feelings of body satisfaction more strongly than it does for European American women. The present study was limited in that no questions were asked about the meaning of body size among older women, but this area of research needs more attention and future studies should address the meaning and significance of body size among older African American women.

Finally, an examination of the associations between demographic variables and the body satisfaction subscales showed that BMI had a strong negative association with perceptions of bodily function and appearance for both ethnic groups. For African American women, there was a positive association between age and perceptions of bodily function and appearance. This is the opposite direction than expected, as this finding indicates that women who are older are also more satisfied with the aspects of bodily function and appearance that they rated as important. It is possible that within this ethnic group there are variations within the category of older women, and women who are chronologically older may also be more adept at maximizing the importance of areas of the body with which they are satisfied. For African American women, there was also a significant positive association between the number of children raised and perceptions of bodily function and appearance. It is possible that an increased focus on a nurturing, caretaking role may lead women in this group to value the aspects of their bodies that allow them to continue to function well, because in order to be able to care for others, individuals may need to maintain their physical capabilities.

These patterns shed light on the meaning of body satisfaction among older women. Although bodily changes may be a source of distress for some women, for others, focusing on important aspects of the body about which they feel positively may be a coping mechanism that may attenuate other age related changes. The women in this study showed high levels of body satisfaction overall, indicating that the body may be an area where older women feel positively overall. The association between subjective age and the weighted bodily satisfaction and appearance subscale showed that perceptions of age and perceptions of the body are linked for older women.

These first steps identify dimensions of the body relevant to older women, yet little is known about individual factors that may affect body perceptions. To follow up on the observations recorded in the first study, the second study will examine theorized predictors of body perceptions among diverse older women.

STUDY 2: SATISFACTION WITH BODY PERCEPTIONS AMONG AGING AFRICAN AMERICAN AND EUROPEAN AMERICAN WOMEN

Sociocultural theorists have suggested that cultural values influence individual values and experiences, and these values are reflected in a person's cognitions and behaviors (Cash & Pruzinsky, 2004; Jackson, 1992; Jackson, 2004). In particular, cultural values and practices shape how individuals perceive and evaluate themselves (Jackson, 2004). A number of factors may influence women's perceptions of their bodies, yet little is known about these patterns of association among older women. The purpose of this study was to evaluate the associations between different dimensions of body perceptions and sociocultural variables, conceptualized as causes or precursors of body perceptions among African American and European American women.

Sociocultural theory posits that the body is a socially constructed object, and women often hold themselves up to socially determined ideals that influence their body perceptions. In particular, women may view their bodies in a gendered framework, wherein social prescriptions about how women should look affect body perceptions. Women may also be gauging their bodies by comparing themselves to other women around them in order to assess where they stand in relation to others. Because age is often read on the body and there is an appearance component to aging, perceptions of age may also affect body perceptions. Subjective (or felt) age has been associated with perceived physical age, (Kleinspehn-Ammerlahn, Kotter-Gruhn, & Smith, 2008), and may also be associated with body perceptions.

Adherence to traditional gender roles may foster body image concern among older women (Pliner, Chaiken, & Flett, 1990), because traditional femininity relies on prescriptions about how a woman should look and act in order to gain status and recognition *as* a woman

(Twenge, 1999). One important element to appearing feminine is maintaining a feminine appearance, including meeting societal beauty standards (West & Zimmerman, 1987).

Another socially determined factor that may influence body esteem is the degree to which women compare their bodies to the bodies of others (Morrison et al. 2004; Paxton et al. 1999). Little is known about body comparisons among older women, and it has been suggested that if older women compare their bodies to those of younger women, their body image might suffer, whereas if they make a comparison to a same age peer that they consider less attractive, their positive body image feelings may be strengthened (Peat, Peyerl, & Muehlenkamp, 2008). It is possible that these two social variables (femininity and social comparison) may work together in their association with body perceptions. That is, women who strongly adhere to traditional gender roles (and thus are more invested in their bodies) may experience less positive perceptions of their bodies if they also frequently compare their bodies to the bodies of other women.

The analysis strategy was as follows. First, the two ethnic groups mean scores on all variables were compared. Second, regression analyses examined the association between theorized predictors and the 2 different body perception subscales created in Study 1. Theorized predictors included body mass index (BMI), age identity, feminine traits, and appearance comparison. Feminine traits were examined as a potential moderator of the relationship between appearance comparison and body perceptions. Separate regressions were run by ethnic group to assess the relationship between the predictor variables and perceptions of cosmetic appearance, and perceptions of bodily function and appearance, as well as the effects of the hypothesized moderation.

Method

Sample

The sample for this study included the same African American and European American recruited for study 1. Survey data were collected from 125 African American and 132 European American women over the age of 65. Demographic information and recruitment procedures for these samples can be found in study 1.

Measures

Subjective Age. Subjective age was measured using one item asking about women's felt age (i.e., subjective age). This item was published by Kaufman and Elder (2002) and was adapted from a previous study (Rossi, 1980). The item is open-ended and participants are instructed to write their answer in the space provided. The continuous scale does not rely on pre-set categories and allows for greater variance (Kaufman & Elder, 2002).

Appearance Comparison. The Physical Appearance Comparison Scale (Thompson, Heinberg, & Tantleff, 1991) is used to measure the frequency with which women compare their appearance to the appearance of others. This measure contains 5 items that are rated on a scale ranging from 1 (never) to 5 (always). One item ("comparing your looks to the looks of other people you know is a bad way to determine if you are attractive or unattractive," reverse scored) showed a low item-total correlation and lowered the overall alpha for the scale, thus it was dropped from the subsequent analyses. The remaining four items were averaged, with higher scores representing greater appearance comparison. The alpha for this measure was .83.

Feminine Traits. Ten items from the short form of the Bem sex role inventory (Bem, 1981) were used to measure conformity to the feminine gender role. The items are rated on a scale ranging from 1 (never or almost never true) to 7 (always or almost always true). These

items were chosen from the longer Bem sex role inventory because confirmatory factor analysis has indicated that the short form of the measure yields more reliable scores, particularly on the femininity items (Bem, 1981). Campbell et. al (1997) indicated that the feminine traits of the short form of the measure have a strong reliability, ranging from .84 to .87. For the present study, the alpha for this measure was .91.

Body Satisfaction. Two subscales, one assessing satisfaction with cosmetic appearance and one assessing satisfaction with bodily function and appearance were derived from the factor analysis of the weighted body image items included in study 1. Participants rated a number of body features that asked how satisfied they were with a particular body feature, and how important that feature was to them. Weighted scores were created using the steps outlined in study one, wherein scores were recoded and then importance and satisfaction scores for each particular item were multiplied. The weighted scores were then used to create the subscales. Subscale scores were calculated by taking the mean of all items on the subscale. The cosmetic appearance satisfaction subscale contains 6 weighted items, including hair texture, skin complexion, hair color, facial features, height, and thickness of hair. The alpha for this subscale was .80. The satisfaction with bodily function and appearance subscale also contains 6 items, including muscle tone and definition, weight, physical strength, physical coordination, firmness of skin on body, and overall physical appearance. The alpha for this subscale was .79.

Control variables. Body Mass Index. Participants were asked to self-report the range in which their height and weight fell by selecting the corresponding box in a chart listing ranges of height and weight corresponding to BMI categories. BMI is a commonly used index that classifies adults as underweight (< 18.5), normal weight (18.5-24.99) overweight (25-29.99), and obese (> 30) (World Health Organization, 2009).

Results

To test whether there were significant differences between the European American women and the African American women on the measures used for this study, a multivariate analysis of covariance (MANCOVA) was run. Because the two ethnic groups differed significantly in terms of age as reported in Study 1, age was included as a control variable. A comparison of the group means (controlling for actual age, see table 3.8) showed that African American women were higher in self reported feminine traits, and European American women reported higher levels of appearance comparison, on average. African American women reported higher average scores on both body perceptions subscales. There was no difference between the groups on subjective age, with actual age controlled.

Table 3.8

Ethnic Comparisons for BMI, Subjective Age, Feminine Traits, Appearance Comparison, and Body Perception Subscales Controlling for Age

Item	<i>African Americans</i>	<i>European Americans</i>	<i>F</i>	<i>p</i>
	<i>M (SE)</i>	<i>M (SE)</i>		
BMI	3.22 (.10)	2.88 (.09)	3.96	.021
Subjective age	63.40 (1.21)	63.25 (1.12)	2.05	.131
Feminine traits	4.52 (.06)	4.20 (.06)	7.24	.001
Appearance comparison	2.25 (.08)	2.71 (.08)	8.66	.000
Perceptions of Cosmetic Appearance	3.95 (.24)	2.84 (.22)	5.31	.006
Perceptions of Bodily Function and Appearance	3.68 (.23)	2.64 (.21)	6.96	.001

Note. Means presented are marginal means, estimated after controlling for age. *SE* represents the standard error of the marginal mean.

Second, the pattern of the relationships between BMI and age, subjective age, and body perceptions were examined. This was done because it was possible that a curvilinear relationship between these variables existed (as was found in Montepare, 1996), and if this were true, subsequent regression analyses would need to be modified to reflect the nonlinearity of these relationships. Scatterplots of the correlations between BMI and age, BMI and subjective age, BMI and perceptions of body function, and BMI and perceptions of cosmetic appearance were examined. None of the scatterplots demonstrated visually that there was a curvilinear relationship between the variables, and there were minimal differences between the linear and quadratic lines of fit for each graph. Additionally, I examined both the Pearson correlation coefficient, which assumes that both variables are normally distributed, and the Spearman Rho, a correlation coefficient that does not assume normality, for each pair of variables, and in no instance did the Spearman Rho demonstrate a stronger relationship. Given these results, I concluded that the relationships between the variables were linear, and no quadratic terms were added to the following regression analyses.

Next, partial correlations controlling for BMI and age were run separately by ethnic group (see table 3.9). These analyses showed a significant positive association between perceptions of cosmetic appearance and perceptions of bodily function and appearance for both groups. This bivariate association was found in Study 1 controlling for age; this analysis shows the association remained significant even with both age and BMI controlled.

Interestingly, there was a significant association between appearance comparison and perceptions of bodily function and appearance for both groups, but this association was positive for European American women and negative for African American women. In other words, European American women who engaged in appearance comparison reported greater satisfaction

with the functional aspects of their bodies that are important to them; African American women who engaged in appearance comparison reported less satisfaction with aspects of body function and appearance that were important to them. For African American women, comparison was unrelated to weighted satisfaction with cosmetic appearance.

For European American women, there was a significant negative association between perceptions of bodily function and appearance and subjective age, and a significant positive association between appearance comparison and perceptions of cosmetic appearance.

Table 3.9

Correlations between Subjective Age, Appearance Comparison, and Body Perception Subscales Controlling for BMI and Age for African American women (above diagonal) and European American women (below diagonal)

Variable	1	2	3	4	5
1. Subjective age	—	-.04	-.14	-.17	-.06
2. Appearance comparison	-.10	—	-.14	-.24*	.01
3. Feminine traits	-.16 [†]	.05	—	.16	.09
4. Perceptions of bodily function and appearance	-.29**	.19*	.16 [†]	—	.30**
5. Perceptions of cosmetic appearance	-.11	.36***	.16 [†]	.49***	—

Note. [†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

To test the hypotheses about the relationships of subjective age, feminine traits, and appearance comparison to different dimensions of body perceptions, as well as the hypothesis

that feminine traits moderate the relationship between appearance comparison and body perceptions, I conducted hierarchical multiple regression analyses separately by ethnic group. I regressed the dependent variables, perceptions of bodily function and appearance (see table 3.10) and perceptions of cosmetic appearance (see table 3.11), on the independent variables (subjective age, feminine traits, appearance comparison, and the interaction between feminine traits and appearance comparison) separately by ethnic group. The control variables, age and BMI, were entered at the first step. At the second step, I entered the three independent variables, subjective age, feminine traits, and appearance comparison. At the third step, the interaction between feminine traits and appearance comparison were entered. As suggested by Aiken and West (1991), I centered continuous independent variables by subtracting the mean of these variables from each score. Next, I calculated interaction terms by multiplying the centered variables (appearance comparison x feminine traits).

Analyses indicated that for African American women, appearance comparison was negatively associated with perceptions of bodily function and appearance. The other independent variables were not significantly associated with perceptions of bodily function and appearance for this group.

For European American women, subjective age was negatively associated with perceptions of bodily function and appearance, and the interaction between feminine traits and appearance comparison was significantly associated with perceptions of bodily function and appearance.

Simple slopes analyses were conducted to probe the interaction using values one standard deviation above and one standard deviation below the mean for appearance comparison (Holmbeck, 2002). Figure 3.2 shows that among European American women low in feminine

traits, high appearance comparison was associated with high levels of satisfaction with important aspects of bodily function and appearance $B = -.22$, $\beta = -.31$, $SE = 0.07$, $p < .05$. In contrast, among women who were high in feminine traits, appearance comparison was not significantly related to satisfaction with important aspects of bodily function and appearance, $B = .04$, $\beta = .06$, $SE = 0.09$, $p = .53$.

Table 3.10

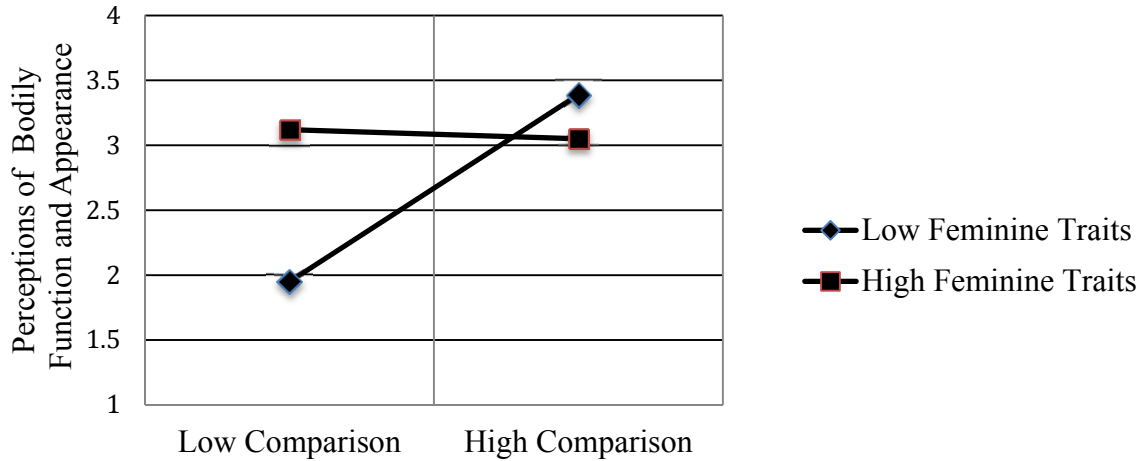
Regression Analysis Summary for Variables Predicting Satisfaction with Perceptions of Bodily Function and Appearance among African American and European American Women

Variable	African American				European American			
	<i>B</i>	<i>SEB</i>	<i>B</i>	ΔR^2	<i>B</i>	<i>SEB</i>	β	ΔR^2
Step 1				.20***				.07*
BMI	-1.05	.25	-.39***		-.57	.20	-.28**	
Age	.07	.04	.17		-.03	.03	-.10	
Step 2				.08*				.11**
Age you feel	-.03	.02	-.17		-.04	.01	-.27**	
Appearance comparison	-.63	.28	-.20*		.38	.22	.15	
Feminine traits	.41	.39	.10		.39	.31	.11	
Step 3				.00				.05**
Feminine traits x appearance comparison	.08	.51	.02		-.82	.31	-.23**	

Note. For African American women, $R^2 = .28$. For European American women, $R^2 = .23$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 3.2

The Interaction between Feminine Traits and Appearance Comparison on Perceptions of Bodily Function and Appearance among European American Women



When examining perceptions of cosmetic appearance as the dependent variable, a different pattern emerged. Regression analyses indicated that for African American women, none of the hypothesized variables were significantly associated with perceptions of cosmetic appearance, and the R squared was not significant. However, for the European American women, the R squared was significant, and appearance comparison was positively associated with perceptions of cosmetic appearance. None of the interactions were significant, indicating that feminine traits did not moderate the relationship between appearance comparison and perceptions of cosmetic appearance.

Table 3.11

Regression Analysis Summary for Variables Predicting Perceptions of Cosmetic Appearance among African American and European American women

Variable	African American				European American			
	<i>B</i>	<i>SEB</i>	β	ΔR^2	<i>B</i>	<i>SEB</i>	β	ΔR^2
Step 1				.06				.01
BMI	-.65	.30	-.22*		-.11	.19	-.06	
Age	.03	.04	.08		-.02	.03	-.01	
Step 2				.10				.15***
Age you feel	-.01	.03	-.06		-.01	.01	-.06	
Appearance comparison	.07	.35	.02		.84	.21	.35***	
Feminine traits	.37	.49	.08		.45	.30	.13	
Step 3				.00				.01
Feminine traits x appearance comparison	-.19	.64	-.03		-.32	.30	-.10	

Note. For African American women, $R^2 = .07$. For European American women, $R^2 = .17$.
 *** $p < .001$.

Discussion

In this study, subjective age, appearance comparison, and feminine traits were examined in relation to body perceptions (i.e., satisfaction with different dimensions of body satisfaction weighted by importance) among African American and European American women over the age of 65. Initial analyses revealed significant mean differences between the two groups on a number of measures. Additionally, different patterns emerged for the 2 groups when correlations and regression analyses were examined.

First, African American women in this sample scored significantly higher, on average, than did European American women on BMI as well as feminine traits. The significant difference in BMI is in keeping with previous literature that has shown that African American women hold slightly higher BMI scores than European American women (Jefferson & Stake, 2009; Stern et al., 2006; Wildes et al., 2001). The mean scores for the African American women in the current study fall within the lower end of the “overweight” range, whereas the average score for the European American women is in the upper end of the “normal weight” range (World Health Organization, 2009).

On average, the African American women rated themselves higher than the European American women on feminine traits. This finding is unexpected, given that previous research has found African American and European American women to be comparable in their self-ratings of feminine traits (Cole & Zucker, 2007; DeLeon, 1993; Harris, 1996). This finding encourages the consideration of the meaning of feminine gender roles to African American women who are 65 and older. Cultural prescriptions encourage African American women to uphold what has been termed a “strong Black woman” persona, one aspect of which is nurturing and meeting the needs of others. African American women often are called on to help raise grandchildren and support family and younger relatives, and culturally specific gender roles rely on African American women’s ability and willingness to selflessly care for others (Romero, 2000; Woods-Giscombé, 2010). This cultural prescription may cause older African American women to care for others, and women may view themselves in a relational manner because of its utility in embracing a caretaking role.

On average, the European American women sampled were significantly older than African American women, and this difference is approximately 5.34 years. This is slightly

greater than the difference in life expectancy for European American women (80.8 years) and African American women (77.4 years) in 2008 (U.S. National Center for Health Statistics, 2010). Due to this age difference, age was included as a control variable in subsequent analyses. Another significant difference that emerged when examining mean scores for the two groups was European American women scored significantly higher on appearance comparison, indicating that they compare their bodies or endorse comparing their bodies to other women's with greater frequency than do African American women. This finding supports research that showed European American women have a greater focus on appearance than do African American women (Breitkopf, Littleton, & Berenson, 2007; Falconer & Neville, 2000; Sabik, Cole, & Ward, 2010) and that they tend to engage in social comparison more frequently than do African American women (Jefferson & Stake, 2009). These findings had not previously been extended to examine this pattern among women in an older age range, and these data suggest older women reflect the same pattern as is observed among younger women.

An examination of the correlations showed that for both ethnic groups, there was a significant positive correlation between perceptions of bodily function and appearance and perceptions of cosmetic appearance, though this relationship seemed to be slightly stronger for the European American women. This correlation is expected, because both subscales are from the same measure. For European American women, there was a significant negative association between subjective age and perceptions of bodily function and appearance, indicating that women who feel older have lower satisfaction with aspects of bodily function and body appearance that they rated as important. It is logical that feeling older may be a result of feeling less physically able or mobile. Interestingly, this relationship was not significant for African American women, though it should be noted that this relationship was also negative. It is

possible that women who are focusing on aspects of the body with which they are not satisfied are not optimizing aspects of aging that compensate for perceived loss. That is, women that feel negatively about aspects of bodily function and appearance that they rated as important also report feeling older, and this may be because women who are not focused on aspects of the body about which they feel positively may feel older.

Appearance comparison was significantly positively associated with weighted satisfaction with cosmetic appearance for European American women, but not for African American women. That is, for European American women, higher levels of appearance comparison were associated with greater satisfaction with the aspects of cosmetic appearance the women deemed important. For European American women, appearance comparison was also associated with higher weighted satisfaction with body function and appearance. This pattern differs from that observed among younger European American populations, for whom appearance comparison enhances body dissatisfaction; for example, Jefferson and Stake (2009) found that for European American women higher levels of comparison were related to *greater* body dissatisfaction. Social comparison among younger European American women has also been shown to exacerbate the effects of body dissatisfaction on disordered eating, and is generally thought to be a liability for younger women (Stice, et. al., 2001; Tylka & Sabik, 2010; van den Berg et al. 2007). The finding that among older European American women, appearance comparison has a positive effect on body perceptions indicates that we need to consider the direction of the comparisons being made. The outcomes associated with making social comparisons can differ depending upon the target of the comparison; Peat, Peyerl, and Muehlenkamp (2008) explain that downward comparisons are seen as self-enhancing, whereas upward comparisons might be threatening. They next argued that if older women compare

themselves to younger women (for example, media images of younger women), their body image might suffer, whereas if they make a comparison to a same age peer that they consider less attractive, their positive body image feelings may be strengthened.

It is possible that older European American women are comparing themselves to others whom they rate more negatively than themselves in terms of appearance, and as a result their own feelings of body satisfaction receive a boost. Along the same lines, older adults tend to make downward social comparisons when evaluating their health, suggesting that social comparison may be useful in certain contexts and may boost self esteem (Heidrich & Ryff, 1993, Wilcox, 1997). Unfortunately, these data do not allow us to discern the nature of the comparisons.

A different pattern emerged when examining the association between appearance comparison and body perceptions among African American women. For African American women, appearance comparison was negatively associated with satisfaction with aspects of bodily function and appearance deemed important by the women, indicating that higher levels of comparison were linked to lower levels of satisfaction with aspects of the body deemed important. This is opposite the pattern observed for the European American women, for whom this association was positive. It is possible that African American women are choosing targets of comparison that they perceive are faring better, and the comparison consequently has a negative effect.

The pattern is not consistent across the ethnic groups included in this study, and the findings indicate that for African American women, engaging in social comparison is likely to have a negative effect. In order to better understand this pattern, data needs to be collected on the target and direction of women's comparison. It is possible that older African American women

are engaging in upward comparison, and that this may account for the negative pattern associated with perceptions of bodily function and appearance.

Some researchers have suggested that examining subjective social status may help better explain differential patterns in social comparison. Subjective social status relies on individuals' perceptions of their relative position in the social hierarchy (Adler, Epel, Castellazzo, & Ickovics, 2000; Singh-Manoux et al., 2003; Wilkinson, 1997). People's perceptions may differ based upon factors such as earlier life circumstances, group experiences, family history, and perceived future trajectories (Wilkinson, 1997). Social comparison plays a central role in this process, as individuals often assess their own social standing through comparisons made to others. Wolff, Acevedo-Garcia, Subramanian, Weber, and Kawachi (2010) explained that the referent group used for making comparison may vary for different ethnic groups. For example, comparison to others in society is considered to be a distal reference group, whereas comparison to people in one's community or same-age peers would be considered a proximal reference group. Wolff et. al., (2010) found that as compared with European Americans, African Americans showed no difference in subjective social status when comparing themselves to a distal reference group, yet African Americans reported a higher subjective social status than European Americans when using a more proximal reference group (such as neighbors, others in the same ethnic group, and parents at the same age). These findings indicate that the target of the comparison needs to be assessed, as differential comparison groups may affect the outcome of the comparison.

The test for moderation revealed that there the interaction between feminine traits and appearance comparison had a significant association with perceptions of bodily function and appearance for European American women, but not for African American women. A graph of

the significant interaction for European American women indicated that feminine traits were linked to perceptions of bodily function and appearance depending on levels of appearance comparison. That is, women who were high on traditional feminine traits showed no difference in terms of satisfaction with aspects of bodily function and appearance that were rated as important, regardless of their level of social comparison. However, women who were low in traditional feminine traits and low in social comparison were the lowest in terms of satisfaction with important aspects bodily function and appearance. Women who were low in feminine traits and high on comparison were highest on satisfaction with important aspects of bodily function and appearance.

This pattern indicates that for European American women, being high on feminine traits or high on social comparison are associated with higher satisfaction with the aspects of bodily function and appearance women deem important; it is only women low on feminine traits and low on appearance comparison that have low satisfaction with bodily function and appearance. This pattern suggests that for older European American women who are low in femininity, engaging in social comparison may act as a buffer against lower satisfaction with bodily function and appearance. Women who are high on these relationally oriented feminine traits (e.g., being sympathetic, understanding, and compassionate) were more satisfied with the function and appearance of their bodies, perhaps because they value what their bodies are able to do for them for social reasons. For example, women who rate themselves high on these traits may highly value friendships and time with family. A woman fitting this profile may appreciate the functional aspects of her body, as it may allow her to maintain these social relations. European American women who are low in feminine traits and high in comparison also show positive

perceptions of bodily function and appearance, indicating that making comparisons even without self-identifying as highly relational has a protective effect for women in this group.

European American women who are low in feminine traits and low in comparison may not be reaping the benefit of either downward comparison or investment in relationships. Relational traits may themselves buffer against the negative aspects of aging (such as isolation), as empathy and compassion may increase feelings of camaraderie and companionship through the aging process. Additionally, there is a relational aspect to making social comparisons—to compare oneself to another, some common ground must be identified. Women that are low in social comparison and are low in relational traits may be isolated and less positive about age related changes in the body. Future research needs to explore these associations directly, as how older women relate to others, in terms of their own traits, their social comparisons, and their social relationships likely all play a role in shaping their body perceptions and life satisfaction.

In contrast, for African American women there was a significant main effect for appearance comparison following the same pattern as observed in the correlations. For African American women, higher levels of appearance comparison were associated with lower levels of satisfaction with important aspects of bodily function and appearance. However, for this group femininity was not associated with perceptions of the body, nor was the interaction between femininity and appearance comparison significant. Adherence to traditional gender roles was unrelated to body perceptions for African American women, indicating that gender roles may be less relevant to body image for older women in this ethnic group. Appearance is often central to women's self-concept and gender performance, yet this pattern was not supported among older African American women. Gender specific cultural prescriptions encourage African American women to care for others, and as women age, enacting a feminine gender role may be more

centered on supporting future generations. Indeed, African American women at midlife report higher generativity scores relative to European American women (Cole & Stewart, 1996). A shift in priorities related to gender roles may account for the lack of significant relationship between femininity and body perceptions, and the importance of other aspects of femininity to older African American women is needed in future research.

The findings from this study show that patterns related to age identity, appearance comparison, and body perceptions differ between African American and European American women. Social factors, such as perceptions of age and the type of social comparison (upward vs. downward) are associated with body perceptions among older women. It is crucial to understand what factors affect older women's body perceptions, because this knowledge is the first step in determining how to promote positive body perceptions among this population. Thus far, little is known about the consequences of positive or negative body perceptions among older women. Among younger women, body image has been associated with psychological well-being, yet this pattern has not yet been examined among older women. To address the question of how body perceptions affect psychological well-being among older women, the next study in this dissertation will examine the association between body perceptions and depression.

STUDY 3: BODY SATISFACTION AND DEPRESSION AMONG AGING AFRICAN AMERICAN AND EUROPEAN AMERICAN WOMEN

Because many women associate their self worth and self esteem with their bodies (Sanchez & Crocker, 2005), poor body image may place some women at risk for negative self perceptions. Body image has also been associated with broader aspects of life, such as social participation, relationships, and life satisfaction (Evans, 1992; Moin, Duvdevany, & Manzor; 2009; Papp & Gardner, 2011; Pujols, Meston, & Seal, 2010). Negative body perceptions may lead some women to feel dissatisfied with various aspects of life, and may be associated with symptoms of depression.

Body dissatisfaction and dissatisfaction with weight have been associated with depression among young and adult women (Forman & Davis, 2005; Tylka & Hill, 2004; Forman-Hoffman, Yankey, Hillis, Wallace, & Wolinsky, 2007; Friedman & Brownell, 1995), yet few studies have examined the effect of body image on mental health among older women (Peat, Peyerl, & Muehlenkamp, 2008). Perceptions of the body may be particularly relevant to examine in relation to depression, as poor physical functioning has been associated with higher levels of depression (Covinsky et al., 1997; Kempen et al., 1999). However, little is known about whether there is an association between different dimensions of body satisfaction and depression among older women. Priorities regarding the body shift with age, and aspects of the body related to function seem to be most relevant for older women. For this reason, it seems likely that body perceptions related to functional aspects of the body will be related to depression. However, it is unclear whether cosmetic aspects of appearance will be related to depression among older women.

Depression is of particular concern among aging populations because of its association with emotional suffering in late life, quality of life, and negative health outcomes among older

adults (Berkman et. al., 1986; Blazer, 2002; Blazer, 2003; Blazer, Burchett, Service, & George, 1991; Blazer, Hughes, & George, 1987; Doraiswamy, Khan, Donahue, & Richard, 2002; Glass, De Lwon, Bassuk, & Berkman, 2006) and rates of depression are higher for women than for men (Kessler, McGonagle, Swartz, Blazer, & Nelson, 1993; Nolen-Hoeksema & Keita, 2003).

Poor body image may also cause some women to withdraw socially. Older women in particular may be susceptible to social withdrawal, as perceptions of bodily limitations or low body satisfaction may make women self aware and withdrawn. Social variables, such as social engagement and social support have been found to have negative association with depression (Glass, deLeon, Bassuk, & Berkman, 2006; Krause, 2001), yet little is known about the association between these variables and body satisfaction. Social engagement may help explain the relationship between body perceptions and depression, as women who are less satisfied with aspects of the body they deem important may withdraw socially, and these feelings of isolation may contribute to symptoms of depression.

Ethnic differences in the association between body satisfaction, social variables, and depression may also exist. Among college-age women African American women report less body dissatisfaction than European American women (Altabe, 1998; Roberts, Cash, Feingold, & Johnson, 2006). Some have found European American and African American adults to have similar depression rates (Blazer, Burchett, Service, & George, 1991; Berkman et. al., 1986), whereas other studies have found lower rates of depressive symptoms in African American samples (Williams, Gonzalez, & Neighbors, 2007). Given the potential for different patterns among ethnic groups, the association between different dimensions of body satisfaction, social variables, and depression need to be examined separately by ethnic group.

The purpose of this study was to evaluate the associations between depression and body perceptions among African American and European American women. Specifically, this study included regression analyses that assess the relationship between depression and the 2 body perception subscales created in Study 1, as well as to examine the association between social engagement (for European American participants) and social support (for African American participants) and depression. Predictors included body mass index (BMI), age, social engagement or social support, satisfaction with bodily function and appearance, and satisfaction with cosmetic appearance.

Because social engagement may mediate the relationship between body perceptions and depression, this hypothesis will be examined among European American women, for whom we have data on social engagement behaviors. This association was not tested among African American women because data were not collected on this measure. Separate regressions were run by ethnic group to assess these relationships because the data collection included different measures of social relations and depression for the two ethnic groups.

Method

Sample

The sample for this study included the same 125 African American and 132 European American recruited for study 1. Demographic information and recruitment procedures for this data can be found in study 1.

Measures

Body Mass Index. Participants were asked to circle their height and weight in a table used to assess body mass index (BMI). BMI is a commonly used index that classifies adults as

underweight (< 18.5), normal weight (18.5-24.99) overweight (25-29.99), and obese (> 30) (World Health Organization, 2009).

Body Satisfaction. Two subscales, one assessing perceptions of cosmetic appearance and one assessing perceptions of bodily function and appearance were derived from the factor analysis performed on the body image items weighted by satisfaction included in study 1. The cosmetic appearance subscale contains 6 weighted items, including hair texture, skin complexion, hair color, facial features, height, and thickness of hair. For African American participants, the alpha for this subscale is .82. For European American participants, the alpha for this subscale is .75. The bodily function and appearance subscale also contains 6 items, including muscle tone and definition, weight, physical strength, physical coordination, firmness of skin on body, and overall physical appearance. For African American participants, the alpha for this subscale is .80. For European American participants, the alpha for this subscale is .76. As noted in the previous studies, subscale scores were created by taking the mean of all items on each subscale.

Social relationships and activity. Different measures assessing social relationships and activity were administered to the two samples. For the European American women, social engagement was assessed. Social engagement reflects the degree to which an individual is engaged in social life. Upon review, the measure of social engagement seemed limited in its scope, and did not assess the quality of the relationships that individuals have with their social and support networks. Many of the questions were simplistic (such as owning a telephone or radio), and did not assess the frequency with which individuals engage in social behaviors. The data from the African American participants were collected subsequent to the European American data collection. In this data collection, a measure of social support was included in

place of the social engagement measure. This measure had an expanded response scale, and asked about the quality of relationships and support with family and friends. Although both measures assess aspects of social relationships, they are conceptually different. Means and standard deviations for variables specific to this study are presented in table 3.3a and 3.3b.

Social engagement. This scale, administered to the European American participants, is a 20 item measure developed by Morgan, Dallosso, Arie, Byrne, Jones, & Waite (1987). The scale measures the extent to which older individuals engage actively (e.g., voting, going on vacation) and symbolically (e.g., reading the newspaper) in social life. The 20 items are answered as “yes” or “no” questions, and the authors reported an alpha level of .70. In the present study, 2 items were omitted from analyses because they had no variance; all participants indicated that they had access to a telephone and that they had a television or radio. To create a scale score, the remaining items were averaged. The mean score for this measure was .76, which is well above the mean. For the present study, the alpha is .67.

Social support. This scale was administered to the African American participants in the study. The Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988) contains 12 items that assess the amount of support that an individual feels they receive from family, friends, and their significant other. The items are rated on a scale from 1 (very strongly disagree) to 7 (very strongly agree). A scale score was created by taking the mean of all items. The mean for this measure was 5.61, which is above the midpoint for the scale, indicating that on average women were receiving a moderately high level of social support. The alpha for the present study was .83.

Depression. For the European American data collection, a measure of depression developed for an aging population was used. For the African American participants, a different

measure of depression was chosen because it had been previously validated for use with this ethnic group. The Geriatric Depression Scale (Brink et. al, 1982), administered to the European American participants, was developed to measure depression in an aging population. This scale contains 30 items that are answered either yes (1) or no (0). Items are summed, with higher scores reflecting greater levels of depressive symptomatology. Brink et. al (1982) suggest that total scores ranging from 1-10 indicate normal, non-depressed behavior; scores of 11-20 indicate mild depression, and scores or 21-30 indicate moderate to major depression. For this sample, the mean score was 5.14, which falls in the middle of the non-depressed range. Researchers (Yesavage et. al., 1982) reported an alpha level of .94 and demonstrated test-retest reliability of .85. For the present study, the alpha is .85.

The CES-D scale for depression (Radloff, 1977), administered to the African American participants, is a commonly used measure of depressive symptoms, and has previously been used to assess depression among aging African American adults. The scale contains 20 items, which ask how often in the past week each depressive thought or feeling was experienced. Items are rated on a 4 point scale, ranging from 0 (rarely or none of the time) to 3 (most or all of the time), and are summed to create a total scale score. Scores over 16 are considered to signal depression among community dwelling elders (see Glass et. al., 2006). Vahia et. al. (2010) defined non-depressed as a score below 8, subclinical depression as a score between 8-15, and depression of scores over 16. For this sample, the mean score was 9.98, which is at the lower end of the subclinical depression range. The alpha for the present study was .87.

Results

First, correlations among all variables were examined separately by ethnic group. Second, hierarchical regression analyses were performed to examine the relationships between the

independent variables, perceptions of bodily function and appearance, perceptions of cosmetic appearance, and social engagement (for European American women) and social support (for African American women) and depression. Last, a series of regressions were run to examine whether social engagement or social support mediated the relationship between perceptions of bodily function and appearance and depression. Bootstrapping analyses were performed to determine if mediation was present.

Partial correlations among all the variables in the study controlling for BMI and age were run separately by ethnic group (see tables 3.12 for African American women and 3.13 for European American women). For both groups there was also a significant negative association between perceptions of bodily function and appearance and depression. Interestingly, there was not a significant relationship between perceptions of cosmetic appearance and depression for either group, nor was there a significant relationship between social support and depression for African American women. However, it is possible that this lack of significant relationship is at least partly due to a ceiling effect, because African American women scored relatively high on social support. For European American women, there was a significant positive relationship between social engagement and perceptions of bodily function and appearance, and a significant negative relationship between social engagement and depression. Interestingly, African American women's mean depression scores fell at the low end of the subclinical depression range, indicating that, on average, women in this group were experiencing mild depression.

Table 3.12

Means, Standard Deviations, and Correlations between Body Perception Subscales, Social Support and Depression Controlling for BMI and Age for African American Women

Variable	<i>M (SD)</i>	1	2	3	4
1. Perceptions of bodily function and appearance	3.81 (2.60)	—	.31**	.10	-.29**
2. Perceptions of cosmetic appearance	4.07 (2.71)	—	—	.03	.09
3. Social support	5.61 (1.35)	—	—	—	-.14
4. Depression	9.98 (8.37)	—	—	—	—

Note. * $p < .05$. ** $p < .01$.

Table 3.13

Means, Standard Deviations, and Correlations between Body Satisfaction Subscales, Social Engagement and Depression Controlling for BMI and Age for European American Women

Variable	<i>M (SD)</i>	1	2	3	4
1. Perceptions of bodily function and appearance	2.54 (2.11)	—	.52**	.22*	-.41***
2. Perceptions of cosmetic appearance	2.96 (1.95)	—	—	.13	-.17 [†]
3. Social engagement	.76 (.16)	—	—	—	-.48***
4. Depression	5.14 (4.44)	—	—	—	—

Note. [†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

To test the hypotheses about the relationships of different dimensions of body perceptions, social engagement, social support, and depression, as well as the hypotheses that

social engagement and social support will mediate the relationship between perceptions of bodily function and appearance as well as perceptions of cosmetic appearance and depression, I conducted multiple hierarchical regression analyses separately by ethnic group.

Regression analyses indicated that for African American women (table 3.14), perceptions of bodily function and appearance was negatively related to depression. Unexpectedly, the relationship between social support and depression did not reach significance. The lack of a significant relationship precludes testing for mediation for this group. Additionally, there was not a significant relationship between perceptions of cosmetic appearance and depression.

Table 3.14

Regression Analysis Summary for Variables Predicting Depression among African American Women

Variable	<i>B</i>	<i>SEB</i>	β	ΔR^2
Step 1				.13**
BMI	.16	.04	.34***	
Age	.00	.01	-.06	
Partner Status	-.01	.04	-.02	
Children Raised	.01	.15	.01	
Step 2				.09*
Perceptions of cosmetic appearance	.02	.02	.12	
Perceptions of bodily function and appearance	-.05	.02	-.34**	
Social Support	-.04	.03	-.13	

Note. $R^2 = .22***$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Regression analyses indicated that for European American women (table 3.15), perceptions of bodily function and appearance was negatively related to depression. Additionally, social engagement was also negatively related to depression. To examine whether social engagement mediated the relationship between perceptions of bodily function and appearance and depression, the mediation with covariate bootstrap syntax provided by Preacher and Hayes (2004) was used. Using this method, a regression based model for the effect of perceptions of bodily function and appearance on depression through social engagement while controlling for age and BMI was estimated. As shown in figure 3.3, social engagement partially mediated the association between perceptions of bodily function and appearance and depression (indirect effect = $-.0252$, $SE = .0065$, 95% confidence interval: $[-.0159, -.0002]$). Because there was not a significant relationship between perceptions of cosmetic appearance, regardless of whether social engagement was included in the regression, there was no potential for moderation and this relationship was not tested.

Table 3.15

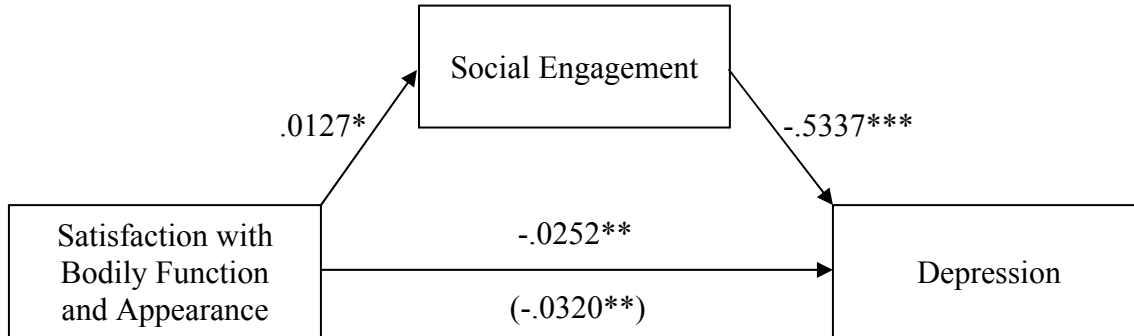
Regression Analysis Summary for Variables Predicting Depression among European American Women

Variable	<i>B</i>	<i>SEB</i>	β	ΔR^2
Step 1				.06
BMI	.00	.02	.00	
Age	.01	.00	.26**	
Partner Status	-.01	.02	-.07	
Children Raised	.02	.06	.03	
Step 2				.32***
Perceptions of cosmetic appearance	.01	.01	.06	
Perceptions of bodily function and appearance	-.03	.01	-.33**	
Social Engagement	-.55	.10	-.45***	

Note. $R^2 = .39***$. ** $p < .01$. *** $p < .001$.

Figure 3.3

Effect of Perceptions of Bodily Function and Appearance on Depression among European American Women



Note. Path coefficients represent standardized regression weights. The coefficient in parentheses represents the total effect of perceptions of bodily function and appearance on depression with social engagement not included in the model as a mediator. Coefficients significantly different from zero are noted by asterisks (* $p < .05$, ** $p < .01$, *** $p < .001$).

Discussion

In this study, different dimensions of body perceptions among African American and European American women over the age of 65 were examined in relation to depression. Additionally, for European American women, social engagement was examined as a mediator of the relationship between body perceptions and depression. Results indicated that for both African American and European American women, perceptions of bodily function and appearance were significantly negatively related to depression. Maintaining physical function is a key component to successful aging (Rowe & Kahn, 1987), and older adults who have positive feelings about aspects of the body related to function may have lower levels of depression. In this study, the results demonstrated that a subjective measure of body function and appearance—perceptions of aspects of the body related to body shape and function—were associated with lower levels of depression. Many women face physical challenges and declining body function, including higher

rates of disability, with increased age (Chodzko-Zajko, Schwingel, & Park, 2009; Leveille, Penninx, Melzer, Izmirlian, & Guralnik, 2000), and some research has suggested that women's attitudes about age related changes in the body can make a difference in how well they cope with these changes; in particular, some studies have suggested that women develop strategies to counter the effects of aging (Baker & Gringart, 2009; Feingold & Mazzella, 1998; Jackson & O'Neal, 1994). Maintaining self esteem and a sense of personal control can buffer the effects of declining function on perceptions of aging (Sargent-Cox, Anstey, & Luszcz, 2012). There is a well established association between self esteem and body esteem among college-aged women (Powell & Hendricks, 1999; Furnham 2002; Grossbard, Lee, Neighbors, & Larimer, 2009), and given the centrality of the body in the aging process, it is possible that maintaining positive body esteem may also lessen the negative effect the physical decline may have on mental health. Future research on the relationship between self esteem and body satisfaction and the potential mediating effects these may have on the physical function-mental health relationship within this population is needed.

Maintaining physical function through continued physical activity is one way to potentially boost feelings of body satisfaction among women in this age range. According to Chodzko-Zajko and colleagues (2009), physical activity is the only lifestyle behavior identified to date that can lessen disease and positively influence physiological changes associated with age. Additionally, engaging in physical activity has been associated with positive mental health, and lower levels of exercise and lack of functional ability have been associated with higher levels of depression (Lautenschlager, Almeida, Flicker, & Janca, 2004; Kempen, Sullivan, van Sonderen, & Ormel, 1999). Habitual physical activity has been identified as a major factor in distinguishing between those who are considered to be aging successfully and those who are not

(Seeman., Berkman, Charpentier, Blazer, Albert, & Tinetti, 1995; Seeman, Charpentier, Berkman, Tinetti, Guralnik, Albert, Blazer, & Rowe, 1994; Weinert & Timiras, 2003). It is likely that women who engage in more frequent physical activity are more satisfied with the functional aspects of their bodies and the appearance of these body features, as increased physical activity has been associated with decreased functional limitation (Brach, Simonsick, Kritchevsky, Yaffe, & Newman, 2004).

Perceptions of cosmetic appearance were unrelated to depression for both ethnic groups. This finding supports previous research demonstrating that for older women, the meaning of satisfaction may change, and the aspects of the body that are most relevant shift from those prioritized in young adulthood. For example, Hurd (2000) found that some older women expressed a shift in priorities with regard to the body such as valuing health over cosmetic appearance. Other researchers have noted that older women may more highly value the functional aspects of the body over aspects related only to appearance (Baker & Gringart, 2009; Franzoi & Koehler, 1998; Janelli 1993), and one study of women ages 55-75 noted a clear distinction between functional and appearance based aspects of the body, and found that women valued functional aspects of the body more highly than aspects of the body related to appearance (Reboussin, Rejeski, Martin, Callahan, Dunn, King, & Sallis, 2000).

For European American women, social engagement partially mediated the relationship between perceptions of bodily function and appearance and depression. One potential explanation for this finding is that women who feel positively about the aspects of their bodies related to function may be more likely to be socially engaged, and this, in turn, may be associated with lower levels of depression. It is possible that women who highly value and are satisfied with bodily function and appearance may be more socially engaged because they may

be less likely to be hindered by physical limitations. Research has shown a clear association between physical function, social engagement, and depression (Ostir, Ottenbacher, Fried, & Guralnik, 2007). However, the association between physical function and body perceptions has not yet been assessed, and will need to be addressed in future research.

Although the association between objective measures of physical function, social engagement, and depression have been formerly established, it was previously unclear if perceptions about functional aspects of the body were associated with social engagement and depression. Satisfaction with the body is a psychological measure, and may vary individually based upon other body attitudes (such as feeling that one's self worth is contingent on appearance) or personality traits (such as optimism). These variables were not assessed in this study, but future research would benefit from their inclusion. Additionally, further investigation is needed into the association between satisfaction with bodily function and objective measures of physical functioning. It is not clear if women who are satisfied with functional aspects of the body are in better health or are physically more capable than those who are less satisfied with aspects of the body related to function. The findings from this study indicate that social engagement does help to explain the relationship between one aspect of body satisfaction and depression for European American women, and future studies are needed to probe the nuances of this relationship.

Social support was hypothesized to be associated with body perceptions and depression among African American women. Social support was not significantly correlated with body perceptions, and interestingly, social support was unrelated to depression, though this lack of association may be due to the high average levels of social support reported by women in this sample. Based upon previous literature, I expected social support to be directly related to

depression, as previous research has shown a strong relationship between social support and mental health (Antonucci, 2001; Fiori, Antonucci, & Cortina, 2006; Krause, 2001). Further investigation is needed to understand why this association was not replicated. Additionally, African American women's average scores on depression fell in the range of subclinical depression. This was unexpected, as African American adults tend to report either equal or lower levels of depression relative to other ethnic groups (Blazer, Burchett, Service, & George, 1991; Williams, Gonzalez, & Neighbors, 2007).

The present study addresses one area that may account for positive gains associated with mental health. Satisfaction with important aspects of the body related to function may reflect a sustained commitment to body maintenance through physical activity, and both routine exercise and body satisfaction may contribute to lower levels of depression. Further research is needed to explore the contribution the physical activity makes towards body satisfaction and psychological well-being among aging women, and previous research indicates that there will be significant associations between these variables.

CHAPTER IV

GENERAL DISCUSSION

This research laid groundwork for examining different dimensions of diverse older women's body image in relation to theorized predictors and outcomes associated with body perceptions. As women age, it is possible that a shift in priorities takes place (Covan, 2005). Some theorists have suggested that older women are freer than young adult women from body image concerns, and have argued that a shift in priorities away from appearance may be the cause (Hurd, 2000). However, a small body of research on body image among older women has challenged this assumption, and a handful of studies have found that older women do not stop caring about their bodies. Rather, some (e.g., Hurd, 2000) have suggested that older women may become more critical of messages about beauty and youth, but still internalize the viewpoint that women are judged based upon the appearance of their bodies.

Because older women may care about their bodies, but they may differently value different aspects of their bodies than do women in other age groups, more information was needed about what aspects of the body are most important to older women, and how satisfied older women are with various body features. The first study in this dissertation examined patterns of body importance and satisfaction, as well as how weighted body satisfaction scores (satisfaction x importance) grouped together for older women. Evidence was found to support the hypothesis that there are significant differences between older African American and European American women on which aspects of the body are evaluated as most important and

reflect the highest levels of satisfaction. However, for both ethnic groups the weighted body satisfaction items grouped into the same two subscales, bodily function and appearance and cosmetic appearance.

This two-factor solution is reflective of qualitative data collected on older women, for whom appearance-related aspects of the body are still important, yet functional aspects of the body may be more relevant (Hurd, 2000), and a number of researchers have suggested that among older women, priorities may shift away from appearance and toward function (Franzoi and Koehler 1998; Janelli 1993; Reboussin et al. 2000) However, the two-factor solution differs from that examined among college-age women (Jefferson & Stake, 2009), indicating that these particular body dimensions are specific to older women.

Sociocultural theories of body image have asserted that cultural values and practices shape how individuals perceive and evaluate themselves (Jackson, 2004). For this reason, a number of social factors may influence women's perceptions of their bodies, yet little is known about these patterns of association among older women. The second study of this dissertation evaluated the associations between different dimensions of body perceptions and sociocultural variables, conceptualized as causes or precursors of body satisfaction among African American and European American women. Results indicated that these patterns differed for women across the two ethnic groups, and that body comparison and femininity were differentially related to body perceptions.

Body image is of major concern to psychologists because of its association with mental health. Body and weight satisfaction have been repeatedly associated with depression and anxiety among younger women (e.g., college-age through middle age) (Forman & Davis, 2005; Tylka & Hill, 2004; Forman-Hoffman, Yankey, Hillis, Wallace, & Wolinsky, 2007; Friedman &

Brownell, 1995), yet it was previously unclear if there was a significant association between body perceptions and depression among older women. Social relations are also an important component of positive mental health (Glass, deLeon, Bassuk, & Berkman, 2006; Krause, 2001). It was hypothesized that social relations may help explain the association between body perceptions and mental health. In particular, positive body perceptions may lead a woman to be more socially engaged, which may be associated with lower levels of depressive symptoms.

The third study in this dissertation assessed this association, and found that for both African American and European American women, there was not a significant association between perceptions of cosmetic appearance and depression. However, for both ethnic groups there was a significant association between perceptions of bodily function and appearance and depression. The hypothesis that social engagement would mediate the relationship between body perceptions and depression was confirmed among European American women, as social engagement was assessed among this ethnic group. Social engagement was not assessed among African American, so this hypothesis was not tested in this group. This research established that perceptions of the body are relevant to the mental health of older women, and specifically identified the dimension of body image that is associated with depression.

Taken together, all three studies broaden our knowledge of body image among older African American and European American women. The first study focused on examining broad patterns regarding individual aspects of the body, and the second and third studies followed up by examining the theorized causes and effects of body perceptions. In examining these patterns, we gain a more nuanced understanding of the areas of bodily concern for older women and the associations that different aspects of body satisfaction have with personality variables and mental

health outcomes. To better understand the implications of these findings, a consideration of the implications for women in the different ethnic groups is in order.

Ethnicity, Aging and Body Concerns

The findings from these studies highlight the importance of considering multiple social categories (i.e., age and ethnic group) simultaneously when analyzing and interpreting body image data. For example, when comparing mean scores on body satisfaction items, older African American women demonstrate a similar pattern to younger African American women, and show higher average scores as compared to their European American counterparts. However, when considering the factor structure of these items, similarities between African American and European American women emerged, and this factor structure differed from that observed among younger African American and European American women. This indicates that a “one size fits all” solution is not the correct approach to older women’s body image. Significant variations are revealed when patterns of body perceptions are examined through different analyses.

One reason that older women may differently value their bodies as compared to younger women is because older women may not be objectified as frequently or in the same manner as young and adult women. In particular, older women are often seen as desexualized (Saucier, 2004), precluding them from being constructed or viewed as sexualized objects. As a result, older women, like other minority groups, are often treated as invisible or dismissed. One proposed explanation for this pattern has been termed “intersectional invisibility” which suggests that individuals holding multiple stigmatized identities are often failed to be recognized as members of their constituent groups due to their intersecting minority identities (Purdie-Vaughns & Eibach, 2008). According to this model, older women, and ethnic minority older women in

particular, are examples of people with intersecting subordinate identities. These individuals are often considered to be marginal members within marginalized groups, and this social status consigns them to a position of social invisibility. Purdie-Vaughns and Eibach (2008) explained that social invisibility has both advantages and disadvantages. For example, marginalized members of social groups may not be subject to the same discrimination as visible members; this pattern is reflected in that older women are not subjected to the same sexualized objectification as are younger women because of their age status. However, this comes at a cost, as older women are also not often thought of as sexy or attractive, which hold high social value for women. Older lesbians are one group for whom invisibility has been noted as a concern, as the intersection of age and sexuality make members of this group less visible (Fullmer, Shenk, & Eastland, 1999).

The implications of invisibility for mental health are not yet clear. The freedom from sexual objectification for older women is a catch-22; that is, older women may not be subject to the same scrutiny of appearance as younger women are, yet being treated as invisible has psychological and possibly material consequences as well. Ageism, sexism, and for African American women and other ethnic minorities, racism, need to be considered to better understand the association between identity and body image.

African American Aging Women. A growing body of work has demonstrated that there are significant ethnic differences in body concerns and satisfaction (Grabe & Hyde, 2006), yet virtually nothing was known about how older African American women regard their aging bodies. The finding that African American women were more satisfied than European American women with various aspects of their bodies is in keeping with previous literature on younger African American women's body perceptions (Altabe, 1998; Roberts, Cash, Feingold, &

Johnson, 2006). However, the pattern that aging African American women also rate many body features as more important was unexpected, and suggests differences in the way that the two ethnic groups evaluate their bodies with regard to the aging process. The common perception that older women do not care about appearance or are free from appearance concerns may arise from women selectively not focusing on aspects of the body with which they are dissatisfied or feel that they have experienced negative age-related changes. This explanation fits with Baltes and Baltes' (1990) selective optimization and compensation model, in which women compensate for age-related losses by minimizing the importance of these areas and focusing on strengths. However, this approach assumes that all older women experience dissatisfaction with their aging bodies.

It is possible that some older women focus on aspects of the body that they are satisfied with, and that are most important to them, as the body may also be a site for selectively maximizing strengths. It is possible that African American women are more adept at recognizing these areas, and may rate them as more important, and this may be due to the positive cultural emphasis that is placed upon African American women's bodies, and the wider range of acceptable body types and sizes in the African American community (Landrine, Klonoff, & Brown-Collins, 1992; Parker et al., 1995). Rather than devaluing their bodies and focusing attention on negative aspects of appearance, as European American women tend to (Nichter, 2000; Britton, Martz, Bazzini, Curtin, & LeaShomb, 2006), African American women may be conditioned at younger ages to maximize the importance of aspects of the body with which they are satisfied.

African American women rated themselves higher than the European American women on feminine traits, which was unexpected given that previous research has found African

American and European American women to be comparable in their self-ratings of feminine traits (Cole & Zucker, 2007; DeLeon, 1993; Harris, 1996). It is possible that cultural prescriptions related to African American womanhood could account for this difference, as African American women often fill a supportive role for family and younger relatives, and this practice relies on African American women's ability and willingness to selflessly care for others (Romero, 2000; Woods-Giscombé, 2010). Women who focus attention on the needs of others, and consequently give less attention to their own needs, may experience negative outcomes related to this behavior. The lack of significant association between feminine traits and body perceptions for this group may indicate that aspects of femininity are less important in relation to body image for older women, and given the decreased focus on women's bodies and sexuality with age (Saucier, 2004), this may be one such reflection of the diminished importance of gender roles in older age.

Interestingly, when examining the association between appearance comparison and body perceptions, the opposite pattern emerged for European American and African American women. There was a significant negative association between appearance comparison and satisfaction with aspects of bodily function and appearance deemed important by African American women, indicating that higher levels of comparison were linked to lower levels of satisfaction. These findings suggest that we need to consider the direction of the social comparisons being made with regard to the body. The outcomes associated with making social comparisons can differ depending upon the target of the comparison (Peat, Peyerl, & Muehlenkamp, 2008). It is possible that African American women are comparing themselves to younger women or to those whom they perceive are doing better than they are, and thus their reported body satisfaction is lower.

Unexpectedly, for the African American participants social support was unrelated to depression, and did not mediate the relationship between satisfaction with bodily function and appearance and depression. The analyses examining the relationship between social support and body perceptions were exploratory in nature and there was not a clear hypothesis about the association between these variables. However, I expected social support to be directly related to depression, as previous research has shown a strong relationship between social support and mental health (Antonucci, 2001; Fiori, Antonucci, & Cortina, 2006; Krause, 2001).

Unfortunately, I did not include a measure of social engagement in the data collection on African American women, and parallel analyses to those performed for the European American women were not possible. There are a number of different dimensions to social support (Krause, 1999), and these may be differentially related to body perceptions. For example, Krause (1999) argued that social support is a multidimensional phenomenon, and can be measured in a number of ways. In particular, there are three main types of social support measures, including measures of social embeddedness, received support, and perceived support (Barrera, 1986). Of the three types, perceived social support may have a stronger association with body perceptions, as both represent psychological assessments of an individual's situation. Social embeddedness, which represents the degree to which one is connected with the community, may be more relevant to body perceptions than is perceived social support, because feelings about the body may prohibit an older woman from engaging in social activity. Future studies need to clearly delineate between these dimensions, and select the measure more appropriate to the concept being examined.

European American Aging Women. For older European American women, increased social comparison was associated with positive perceptions of the body. Women in this group

may be comparing themselves to others whom they rate more negatively than themselves in terms of appearance, and as a result their own feelings of body satisfaction receive a boost. For this group, the interaction between feminine traits and appearance comparison was significantly associated with satisfaction with bodily function and appearance. A graph of this interaction showed that for European American women low in feminine traits, low appearance comparison was associated with low levels of satisfaction with bodily function and appearance. In contrast, among women who were high in feminine traits, appearance comparison was not significantly related to satisfaction with bodily function and appearance.

This is the opposite of the pattern expected, because it was hypothesized that European American women who adhere to traditional gender roles may also have a strong investment in appearance, and may be more likely to socially compare their bodies. However, this finding is unexpected in that women who rated themselves as low on feminine traits and low on social comparison had the lowest satisfaction on aspects of bodily function and appearance that they rated as important. This pattern provides a new perspective on the meaning of both social comparison and femininity to women in this group. Neither had previously been theorized as a buffer against negative body perceptions, but this pattern indicated that either engaging in downward social comparison or possessing relational traits provides a protective effect with regard to body perceptions. The feminine traits assessed in this study are relational and represent positive aspects of femininity, and it is possible that assessing other dimensions of femininity may show a different pattern with regard to body perceptions. To further probe these findings, additional research needs to address the effects of both the different aspects of femininity and the direction and targets of social comparison on body perceptions among older women.

For European American women, support was found for the hypothesis that social engagement partially mediated the association between perceptions of bodily function and appearance and depression. Research has shown an association between physical function, social engagement, and depression among adults aged 65 and older (Ostir, Ottenbacher, Fried, & Guralnik, 2007). It is possible that women who rate their bodily function and appearance as important and have positive perceptions of these features do so because they are in better physical shape. It may also be the case that women who are committed to regular exercise and are in good physical shape consequently rate those aspects of their bodies as more important and are more satisfied. However, physical fitness and objective measures of function were not captured in the current data. Additional research is needed to examine the association between body perceptions and objective physical functioning to determine if this third variable is driving the associations observed in these analyses.

Broader Implications

More consideration needs to be given to the meaning of body image in older women's lives. While it is clear that older women are concerned with their bodies, and that body perceptions are associated with other areas of life, little is known about how women interpret questions about body perceptions. For example, Baker and Gringart (2009) pointed out that the statement "I am satisfied with my body" may be interpreted differently by older women, who may be thinking about functional abilities, and younger women, who may be thinking about appearance.

The significance of valuing functional aspects of the body over appearance is an idea that has repeatedly emerged in the research on body image. Objectification theory suggested that when women internalize the perspective that they are sexualized objects and begin to self

objectify, they are focused on how their bodies look rather than what their bodies can do (Fredrickson & Roberts, 1997). Following up with this theory, Fredrickson et. al. (1998) developed a measure of self objectification that asks participants to rank aspects of the body according to importance, and ranges from items that identify perceptions of the body as an object (e.g., “how important to you is physical appearance?”) to perceptions of the body as an instrument (e.g., “how important to you is physical fitness level?”).

Interestingly, the scoring procedure for this measure considers weight to be an appearance-related feature, as do many measures of body concerns among younger women. However, in this research, weight grouped together with items about bodily function (e.g., physical strength, muscle tone and definition, physical coordination) in the factor analysis. For many college-age and middle age women, weight may be a primarily cosmetic concern, whereas for older women weight may be more closely related to functional aspects of the body. Weight loss or gain in older age may also represent different issues than for women at younger ages. For example, access to adequate nutrition may be an issue for some older women, as acquiring and preparing nutritionally rich food may become more difficult (Bowman, 2008). Development of physical limitations or illness may limit exercise or affect metabolism, which may result in weight gain, one potential source of body image distress among older women (Maine, McGilley, & Bunnell, 2010). The meaning of weight and weight-related changes need careful attention to better understand both the causes and consequences of this physical change for aging women.

Based upon the framework of objectification theory, older women who rate functional aspects of the body as more important are conceptualizing their bodies instrumentally, rather than as objects. The effects of self objectification on young adult and middle age women are damaging, and viewing the body as an object has serious consequences for both their physical

and mental health (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996). Older women's shift to focus on what the body can do, rather than how it looks, may explain why some have mistakenly assumed that body image was less relevant to examine among this population, and may account for the absence of research on older women in the literature. However, it is clear that there are very real psychological and physical consequences associated with body perceptions, and research in other areas of healthcare and psychology need to consider the influence of feelings about the body.

Feelings about age and perceptions of the body are likely related, and examining subjective age was one way to assess this association. As women age they are likely to face complex messages regarding body image and age, and perceptions of their bodies are subject to change. Simultaneously, attitudes about the aging process may influence feelings about age itself, both in terms of women's satisfaction with the way they are aging, as well as how old they feel. Women who feel older may have more negative feelings about their bodies, because feeling old is often associated with age-related changes in the body, including changes in mobility and body function and changes in appearance. Alternatively, women who experience a decline in body function or perceive that their appearance is showing signs of aging may report feeling older due to these bodily changes. Healthcare professionals working with this population need to be aware of the importance of perceptions of aging as well as perceptions of the body, as both may influence the success of treatment of and recovery from physical ailments.

There are significant differences in the rates of disease among older adults from different ethnic groups. For example, African Americans over the age of 65 have higher average rates of hypertension, diabetes, and cardiovascular disease as compared to European American adults (Anderson & Smith, 2003; Arias & Smith, 2003). Among the oldest old, African Americans have

the highest levels of chronic illness and disability (Ciol et al., 2008; Manton & Gu, 2001). Access to healthcare and adequate nutrition are crucial for maintaining health during later life, and African American adults are disproportionately affected by these issues. African American adults over the age of 65 are more likely than European American adults of the same age to live below the poverty line, to be food insecure (that is, to not have regular access to nutritionally sound food) and to live a sedentary lifestyle (Bowman, 2008). It is essential that we do not assume that all older adults have uniform access to the resources needed to maintain a healthy lifestyle, and that we continue to explore ethnic differences in these broader patterns.

Limitations and Future Directions

The majority of participants in this study were heterosexual, and different patterns of body image emerge for women who identify as lesbian (Dworkin, 1998; Kozee & Tylka, 2006). For example, a test of the model of objectification theory among lesbian and heterosexual women demonstrated that this model provided an excellent fit to the data for heterosexual women, but was a poor fit to the data for lesbians (Kozee & Tylka, 2006). It was suggested that the interrelationships among the objectification theory constructs were different and more complex for the lesbian participants (Kozee & Tylka, 2006). Women with different sexual orientations may experience different pressures associated with appearance and bodily maintenance, and additional research should examine these patterns among sexual minority women.

This study was also limited in that it only examined patterns related to body image and associated variables for African American and European American women, and this should be extended to consider women in other ethnic groups. In particular, research on younger women has shown that there are significant differences in body perceptions among Asian American and

Latina women (Grabe & Hyde, 2006), and virtually no research has been focused on body image among aging women in these ethnic groups. Furthermore, there may be significant variation among different ethnic groups within the category of European American, and in this study differences between these groups were not delineated or discussed.

Given the different cultural pressures and body expectations for younger women in these ethnic groups, I expect these patterns to be distinct. College-aged Asian American women tend to report higher body dissatisfaction than do African American women, and often are on par with European American women (Sabik, Cole, & Ward, 2010). However, women in this group also report cultural pressure for their bodies to conform to the “ideal” body, as women in this group may feel that their body size and appearance reflects positively or negatively on their ethnic group (Lau et al., 2006; Phan & Tylka, 2006). Older Asian American women may be facing culturally specific pressures regarding the body, and as a result I expect women in this group may report higher levels of body importance and lower levels of body satisfaction. Younger Latina women tend to report body ideals that are closer to those reported by African American women, that is, larger average ideal body sizes and less adherence to strict beauty ideals (Winkleby et al. 1996; Crago et al. 1996). However, women in this ethnic group also report levels of disordered eating comparable to European American women (Crago et al. 1996; Smith & Krejci 1991). Older Latina women may look similar to African American women with regard to the importance placed on aspects of the body and higher levels of overall body satisfaction. Yet it is unclear whether patterns of disordered eating would replicate among older women, as the emphasis on body size (as opposed to body function) may lessen with age.

The scope of this dissertation focused on aspects of the body related to appearance; even the aspects of the body that have to do with function (i.e., the items on the bodily function and

appearance subscale) are related to overall appearance, and aspects of the body that are not traditionally thought of in the body image realm may significantly contribute to physical functioning. For example, the data collected for this project did not include questions assessing the importance of and satisfaction with body parts such as hands, eyes, fingers, and legs, though previous research (Janelli, 1993) found that women ages 60-98 expressed dissatisfaction with these body parts. These body parts, as well as the knees, back, and other joints may often be a source of pain, and consequently, a source of dissatisfaction. The measure of body satisfaction modified for these studies was based on a measure used primarily with young adult women. Although items thought to be relevant to older women were added, many aspects of the body associated with physical functionality were not included.

Physical functionality is a major factor in considering whether older adults are aging successfully, and may be central when considering issues regarding retaining independence, positive perceptions of aging, and positive body image. Future research is needed to assess the relationship between sustained physical activity and satisfaction with body perceptions, particularly aspects of the body associated with function. Regular physical activity has been associated with reductions in morbidity and mortality, postponement of disability, independent living, improved well-being, and better quality of later life (Lautenschlager et. al., 2004; Spirduso and Cronin, 2001).

Another limitation is that weighted satisfaction scores were used to create the body perception subscales used in these studies. This was done in order to focus on the aspects of the body most relevant to the women in this study. However, this means that the data presented in these studies represented women's satisfaction with areas of the body that are important to them. It is possible that women may place less importance on the aspects of the body that they are not

satisfied with so as to minimize negative outcomes associated with body dissatisfaction. Based upon Baltes and Baltes' (1990) selective optimization and compensation model, older adults may focus on aspects of life that are perceived to be positive. Women who selectively focus on aspects of the body they are satisfied with may fit this model, and these women's experiences are represented in the studies presented in this dissertation. However, women who place less value on the importance of particular aspects of the body may also be employing the same strategy, but may realize that focusing on bodily features that they are dissatisfied with may emphasize feelings of frustration or loss of function. For this reason, further investigation is needed as to how and why older women evaluate the importance of particular aspects of the body. We need to further explore the experiences of women who are not invested in the importance of various bodily features, because we may find a different pattern altogether.

There were not many significant findings regarding the satisfaction with cosmetic appearance subscale. Previous research indicates that the importance of particular aspects of the body may change with age (Covan, 2005), and this may be one such reflection. However, there are a number of factors not assessed in this study that may be affected by body perceptions, including sexual satisfaction and relationship satisfaction (Moin, Duvdevany, & Manzor, 2009; Papp & Gardner, 2011; Pujols, Meston, & Seal, 2010). There may also be significant differences in the association between body satisfaction and relationship and/or sexual satisfaction among women who are partnered, divorced, or widowed (Meltzer & McNulty, 2010). This research also did not explore patterns of self esteem and self worth in relation to the body among older women, although feelings of self worth, particularly in relation to the body, are important for older women (Baker & Gringart, 2009). It's possible that body image may be related to self

esteem among this population, and this may be particularly true for women who associate their body with their self worth. Additional research is needed to assess these associations.

Future research needs to broaden the scope of body image research to consider the association between body perceptions and quality of life, particularly for older women. Cash and Fleming (2002) argued that although body image affects many aspects of life, there had previously been no assessment of the differential effect of body image on various aspects of life. Additionally, a recent research trend considers body image more broadly (i.e., in relation to physical condition and illness) in relation to quality of life across a broad range of medical and health disciplines (Cash et. al., 2004). Because perceptions of the body may influence and may be influenced by many areas of life, notions of the body must expand beyond considering weight and appearance as the most central tenets.

Specifically, future research needs to expand to examine how perceptions of the body are associated with broader aspects of life for older women, including (but not limited to) self esteem and self worth, identity, work , relationships (including romantic, familial, and friendship), sexual satisfaction, health, exercise, and life satisfaction. It is possible that there are also significant variations among different cohorts of women that are reflected in what we observe as age related differences regarding the body. When the women in this sample were coming of age, there was less of a focus on youth culture, and media images of women were not as routinely sexualized (Brumberg, 1997). The age at which social and cultural events are experienced have a different impact on individual development, and many young adults form a strong bond with their generation (or cohort) based upon the shared experience of these events (Stewart, 2003). Some of the significant differences observed between age groups may be attributed to the cultural influences that different generations are exposed to at different points throughout life. By

the same token, findings in the current study that have been attributed to the participants' age could alternatively be a function of their cohort. Given the design of this study, there is no way to definitively rule out this alternative explanation.

One limitation of this study is that it is correlational in its design, and causality cannot be inferred from the findings. In the future, I plan to follow up with experimental studies that help address the directionality of the patterns observed in this data. Additionally, I plan to conduct a long term longitudinal data collection to further address the questions that have arisen from these analyses, such as: Are women who are more invested in appearance at younger ages more likely to experience negative effects related to age/aging? Do women who maintain a healthy weight and exercise more frequently show a more positive trajectory in terms of successful aging because they are scoring high on their satisfaction with function items? And, does the development of disease, illness, or a decline in functional ability affect body perceptions and mental health? Gathering longitudinal data will help us understand variability in how individuals manage and respond to bodily changes can provide insight into how quality of life may be improved.

Conclusion

This dissertation has demonstrated that bodily concerns are relevant for older women, yet they may differ in key ways from the aspects of the body with which younger women demonstrate concern. Specific aspects of body satisfaction weighted by importance are associated with age identity, femininity, social comparison, and depression among older European American and African American women. This research was unprecedented in this population, and establishing that there are significant associations between these variables indicated that body image is an integral part of older women's well-being. Current research on

body image among old women has either focused on women facing menopause (Chrisler & Ghiz, 1993; Maine, McGilley, & Bunnell, 2010) or was qualitative in nature (Covan, 2005; Hurd, 2000), and this research tends to focus solely on the experiences of European American women, and gives little attention to women from other ethnic groups. Older women's body perceptions affect and are affected by many aspects of life, and this project laid groundwork for assessing patterns of body concerns as well as theorized predictors and outcomes associated with body perceptions. There is a great deal of room for future research to follow up on these studies, and to assess the effect of body perceptions on other aspects of aging women's lives.

Appendix A
Body Satisfaction and Importance measure
[African American and European American Samples]

Response Scale: 1 (not important or not satisfied) to 4 (very important or very satisfied)

1. How satisfied are you with your height?
2. How important to you is your height?
3. How satisfied are you with your skin complexion?
4. How important to you is your skin complexion?
5. How satisfied are you with your hair texture?
6. How important to you is your hair texture?
7. How satisfied are you with the thickness of your hair?
8. How important to you is your hair thickness?
9. How satisfied are you with your hair color?
10. How important to you is your hair color?
11. How satisfied are you with your facial features (eyes, nose, ears, facial shape)?
12. How important to you are your facial features (eyes, nose, ears, facial shape)?
13. How satisfied are you with your muscle tone and definition?
14. How important to you are your muscle tone and definition?
15. How satisfied are you with your body proportions?
16. How important to you are your body proportions?
17. How satisfied are you with your weight?
18. How important to you is your weight?
19. How satisfied are you with your bust?
20. How important to you is your bust?
21. How satisfied are you with your physical strength?
22. How important to you is your physical strength?
23. How satisfied are you with your physical coordination?
24. How important to you is your physical coordination?
25. How satisfied are you with the firmness of your facial skin?
26. How important to you the firmness of your facial skin?
27. How satisfied are you with the firmness of the skin on your body?
28. How important to you is the firmness of the skin on your body?
29. How satisfied are you with your overall physical appearance?
30. How important to you is your overall physical appearance?

Appendix B
Physical Appearance Comparison scale
[African American and European American Samples]

Response Scale: 1 (never) to 5 (always)

1. At social gatherings (for example, parties, church, etc.), I compare my physical appearance to the physical appearance of others.
2. The best way for people to know if they are overweight or underweight is to compare their figure to the figure of others in their social circle.
3. At social gatherings, I compare how I am dressed to how other people are dressed.
4. Comparing your “looks” to the “looks” of other people you know is a bad way to determine if you are attractive or unattractive.
5. I sometimes compare my figure to the figures of other people in my social group.

Appendix C
Bem Sex Role Inventory
[African American and European American Samples]

Response Scale: 1 (never or almost never true) to 7 (always or almost always true)

1. Affectionate
2. Compassionate
3. Eager to soothe hurt feelings
4. Gentle
5. Loves children
6. Sensitive to the needs of others
7. Sympathetic
8. Tender
9. Understanding
10. Warm

Appendix D
Social Engagement Scale
[European American Sample]

Response Scale: 0 (no) to 1 (yes)

1. Do you have access to a telephone?
2. Have you made a personal telephone call in the last week?
3. Do you read a newspaper or magazine regularly?
4. Do you attend religious services, gatherings, or meetings?
5. Did you vote in the last election?
6. Have you taken a vacation in the last year?
7. Do you plan to take a vacation in the coming year?
8. Do you use the public library?
9. Do you attend meetings of clubs, organizations, or societies?
10. Do you have a senior citizen's discount card?
11. Do you have access to a car?
12. Do you have a television or a radio?
13. Are you employed or do you do volunteer work?
14. Do you have regular contact with family and friends?
15. Do you live alone?
16. Are you able to physically do all that you need to in your daily life?
17. Do you get out and about as much as you would like?
18. Do you have one or more friends in the area?
19. Do you feel lonely very often?
20. Do you know at least one person to ask for help?

Appendix E
Social Support scale
[African American Sample]

Response Scale: 1 (very strongly disagree) to 7 (very strongly agree)

1. There is a special person who is around when I am in need.
2. There is a special person with whom I can share my joys and sorrow.
3. My family really tries to help me.
4. I get the emotional help and support I need from my family.
5. I have a special person who is a real source of comfort to me.
6. My friends really try to help me.
7. I can count on my friends when things go wrong.
8. I can talk about my problems with my family.
9. I have friends with whom I can share my joys and sorrows.
10. There is a special person in my life who cares about my feelings.
11. My family is willing to help me make decisions.
12. I can talk about my problems with my friends.

Appendix F
Geriatric Depression scale
[European American Sample]

Response Scale: 0 (no) to 1 (yes)

1. Are you basically satisfied with your life?
2. Have you dropped many of your activities and interests?
3. Do you feel that your life is empty?
4. Do you often get bored?
5. Are you hopeful about the future?
6. Are you bothered by thoughts you can't get out of your head?
7. Are you in good spirits most of the time?
8. Are you afraid that something bad is going to happen to you?
9. Do you feel happy most of the time?
10. Do you often feel helpless?
11. Do you often get restless and fidgety?
12. Do you prefer to stay at home, rather than going out and doing new things?
13. Do you frequently worry about the future?
14. Do you feel that you have more problems with memory than most?
15. Do you think it is wonderful to be alive now?
16. Do you often feel downhearted and blue?
17. Do you feel pretty worthless the way you are now?
18. Do you worry a lot about the past?
19. Do you find life very exciting?
20. Is it hard for you to get started on new projects?
21. Do you feel full of energy?
22. Do you feel that your situation is hopeless?
23. Do you think that most people are better off than you are?
24. Do you frequently get upset over little things?
25. Do you frequently feel like crying?
26. Do you have trouble concentrating?
27. Do you enjoy getting up in the morning?
28. Do you prefer to avoid social gatherings?
29. Is it easy for you to make decisions?
30. Is your mind as clear as it used to be?

Appendix G
CES-D Depression scale
[African American Sample]

Response Scale: 1 (rarely or none of the time) to 4 (most or all of the time)

1. I was bothered by things that usually don't bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues even with help from my family or friends.
4. I felt that I was just as good as other people.
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort.
8. I felt hopeful about the future.
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.
19. I felt that people disliked me
20. I could not get "going."

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