

ETHNIC DIFFERENCES IN PREFERENCES FOR FEMALE WEIGHT AND WAIST-
TO-HIP RATIO: A COMPARISON OF AFRICAN AMERICAN AND WHITE
AMERICAN COLLEGE AND COMMUNITY SAMPLES

by

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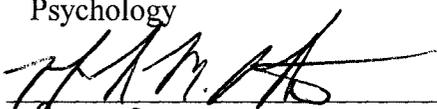
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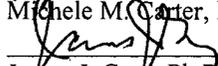
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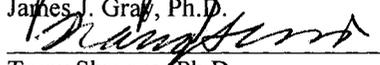
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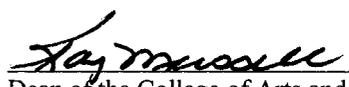
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ABSTRACT

The present study examined both ethnic differences and differences between college and community samples in preferences for ideal body size and shape. As expected, it was found that African American men were more likely to choose heavier figures as ideal than were White American men. There were no differences in ideal weight between college and community subsamples. As expected, both ethnic groups chose figures with a low WHR, but African American men were more likely to chose a very low WHR as ideal. The study's findings suggest that African American men's preferences serve as a protective factor against eating and body image pathology. Furthermore, findings replicate research showing weight to be a more important cue than WHR in the mate selection process.

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CHAPTER ONE

INTRODUCTION

Empirical research on eating disorders among ethnically diverse populations is relatively recent. Within the past 10 years, there has been an increase in the number of investigations exploring reasons why eating disorders are more prevalent among White American females than females of other ethnic groups, particularly African Americans (Abrams, Allen, & Gray, 1993; Harris, 1994; Greenberg & LaPorte, 1996; Parker, Nichter, Nichter, Vuckovic, Sims, Ritenbaugh, 1995; Wilfley, Schreiber, Pike, Striegel-Moore, Wright, & Rodin, 1996). Specifically, research has sought factors that serve to protect African American women from developing eating disorders.

One factor that has been cited as serving a protective function for African American women is having a multi-faceted body image. According to Parker (1995), African American adolescent females were more flexible in their concepts of beauty than their White American counterparts. This flexibility means that African American perceptions of beauty include, but are not limited to physical characteristics; also important are overall style, attitude, having good grooming habits, personality, and how an individual carries oneself.

A second protective factor is disidentification by African American women from mainstream, White ideals. Hebl and Hetherington (1998) found that Black women were less

likely to stigmatize obesity than their White counterparts. Such findings support Steele's (1992) assertion that disidentification protects self-esteem by diminishing the importance of a domain in which a group may not excel. Steele (1992) posits that Black women may discourage other Black women from the pursuit of thinness which fosters an increased acceptance, and even preference for, larger body sizes. Ogbu (1995) suggests that disidentification from mainstream White culture may create a value system that endorses the values that are opposite those of White culture. Characteristics devalued by White culture, for example, would be transformed into favorable characteristics (e.g. drug use). Kerr, Crocker, and Broadnax (1995) proposes that Black women, by rejecting the evaluations of others as a relevant basis for self-esteem, are protecting themselves from eating pathology.

A third factor, possibly related to disidentification, that protects African American women from maladaptive eating behaviors is their self-perception. In a study of adolescents, Desmond, Price, Hallinan, and Smith (1989) found that only 40% of heavy black females perceived themselves as heavy as compared with 100% of heavy white females. The other 60% of heavy black females rated themselves as normal weight. Most thin and normal weight black females accurately identified their weight category. In other words, both African American and White American women held distorted perceptions of their actual weight category, but in opposite directions.

A fourth, less well-researched factor that may serve to protect African American women from eating pathology and low self-esteem is cultural teachings and values.

Harris (1989) found that African American women were more satisfied with and held more positive feelings toward their bodies than did their European American counterparts. She suggests that cultural variables should be included in future research. Male preference for a larger body size may be considered a cultural variant that plays a role in differences between European and African American women's feelings about their bodies. Thomas (1989) suggested that African American women's perceptions of the preferences of significant men in their lives were strongly related to their body-image satisfaction. Although the accuracy of these preferences was not assessed, their perception of males' preferences was perhaps a more important factor influencing their body-image satisfaction than was actual preference. Male preference for certain body sizes and shapes is the least well-researched of the protective factors. Finding that African American men as well as women reject the mainstream value of a thin female figure reinforces the idea that female perceptions of male preferences for body size and shape help to buffer them from eating and body image pathology. In addition, male preferences may contribute significantly to the finding (e.g. Desmond et al., 1989) that many heavy African American women do not consider themselves to be overweight. If the men that African American women consider to be eligible mates do not desire a thin figure, these women have fewer reasons to strive toward a thin ideal.

Exploring male preferences as a protective factor for African American women is the focus of the current study.

Ethnic Differences in Male Preferences for Female Body Size

Research exploring differences between African American and White American male preferences for female body size has generally found African American men to be more accepting of larger body sizes for women than their White American counterparts. Furthermore, White American men have indicated preferences for women that are thinner than the preferences of their African American counterparts (Cohn & Adler, 1992; Fallon & Rozin, 1985; Greenberg & LaPorte, 1996). For example, Thompson, Sargent, & Kemper (1996) examined adolescent males' perceptions of ideal female body size and found that African American males preferred a larger female size than White American males. When subjects without girlfriends were asked to estimate the height and weight they would desire for a girlfriend, the calculated BMI score was significantly different between ethnicities, with African American males desiring a BMI in the appropriate weight category for 15 year old females and White American males desiring a BMI value that fell into the underweight category (Thompson et al., 1996). African American males were also 1.9 times more likely to select a larger ideal female hip/buttocks size and 1.7 times more likely to choose a larger ideal female thigh size than White subjects. However, both groups of males selected figures that were larger than the figures reported as ideal by females in other studies using an illustration depicting female body sizes along a continuum from underweight to overweight (Collins, 1991; Desmond et al., 1989; Gray, Ford, & Kelly, 1987; 1968; Rand & Kuldau, 1990). Interestingly, in the Thompson et al. (1996) study, an assessment of social norms found that White American males felt

that their parents, male friends, and female friends would prefer an ideal female size smaller than what African American subjects felt their parents, male friends, and female friends would prefer. Not only did male participants prefer a female body size larger than what women considered ideal, but there also existed racial differences in the figures that participants chose as ideal and in the figures that participants' believed their family and peers would select as ideal.

Each of the above studies is limited in that it only examined overall body weight. That is, body type, or shape, was not examined as a variable affecting differences between groups on measures of ideal female figure.

Ethnic Differences in Male Preferences for Low Waist-to-hip Ratio

Many studies examining body size preference have ignored female curvaceousness (waist-to-hip ratio) as a factor affecting differences in expressed ideal for females between ethnicities. Waist-to-hip ratio (WHR) is a quantification of the fat distribution for both men and women and is calculated by dividing the circumference of the waist by the circumference of the hips. Low WHR, typically defined as .68 - .80, has been suggested to be an indicator of reproductive health and fertility (Singh, 1993). Theoretically, it may also signal the absence of major diseases according to studies that found that the risk-factor profile for obesity-related diseases varies with the distribution of fat rather than the total amount of fat (Bjorntorp, 1988, 1991; Leibel, Edens, & Fried, 1989). Singh (1993) concludes that men have a mechanism for detecting reproductive

viability and use WHR in making judgments of female attractiveness. Although men may not consciously choose mates because of high reproductive potential, a low WHR can act as a broad filter through which men select potential mates from the entire pool of women, later narrowing that pool on the basis of other physical and personality features (Singh, 1993).

In one study, Cunningham, Roberts, Barbee, Druen, and Wu (1995) found that when asked to rate photographs of African American women along a number of dimensions, African American men attending the University of Louisville indicated greater attraction to heavier figures than did White men, including higher ideal weight and a preference for larger buttocks. The groups were noted to be relatively similar in the ratings of attractiveness based upon facial features, but differed in the attractiveness ratings based upon components of the body. Participants also gave the height and weight of their ideal woman. The stimuli used to assess preferred body size and shape were two poster boards of full female body silhouettes, differing only in lower body size, with one depicting 7% larger buttocks (Roberts & Hinz, 1990). Cunningham et al. (1995) note the limitation of such a stimulus: "Further research, using a wider range of physique stimuli...seems warranted" (p.274).

Unlike the Cunningham et al. (1995) study with college males from an ethnically diverse institution, Singh's (1994a) study with college males from a predominantly white institution found that neither African American men nor women associated attractiveness, sexiness, companionship, or desirability for a long term relationship with overweight

figures, regardless of WHR, although these figures were seen as kind and reproductively viable (Singh, 1994a). When African American men and women were asked to judge figures on various personality characteristics including intelligence, attractiveness, reproductive capability, and others, it was found that males and females generally assigned an attractiveness ranking using the WHR within each body weight category. In other words, figures with similar body weight were assigned lower ranking if they had higher WHRs. These findings are similar to those reported for White American men and women and do not support the belief that African Americans find overweight females attractive (Singh, 1994a). Men of both ethnic groups apparently used similar criteria in judging ideal female body size, and this was later extended to Indonesian men as well (Singh & Luis, 1995).

The discrepancy between the Singh (1994a) study and previous research citing African Americans as finding heavier figures attractive could be due to several factors: First, the stimuli used by Singh to assess most attractive female seemed to depict a White American female. Although the African American subjects were instructed that the figures represented an international composite of body shapes and sizes, the line drawings were in black outline on white paper and had European hair style and texture (Singh, 1994a). Had the stimuli been slightly shaded or had a different hair type, the results may have shown differences between ethnicities. An additional, and perhaps more important shortcoming was that the stimuli did not include female figures with a WHR lower than .70. A restricted range of WHR's as used in the Singh (1994a) study may not have

allowed for the examination of subtle differences between ethnic groups that may actually exist. Perhaps, if .50 were included, as well as WHR values in increments of .05, underlying differences in female body size preference would become more apparent. With Singh's restricted range of WHR's, all the men chose .7 or .8 and no men found the heavier women attractive. Repeating the study with WHR's of .5 and .6 may have resulted in African Americans choosing such WHR's as ideal, whereas the white American participants may still have chosen .7 or .8. Furthermore, African American men may select their ideal figure according to WHR and overall body weight; thus, presenting a larger range of WHR's increases the chances of them choosing figures different from those chosen by White American males.

According to Furnham et al. (1997), the interaction of body weight and WHR could be the best predictor of attractiveness. If this is the case, then African American males may only choose heavier figures as attractive when their WHR is low.

Low waist-to-hip ratio has been noted to be a feature of women's bodies that men have found attractive throughout history, despite decreases in overall body weight (Singh, 1994c). The classic study of Playboy playmates and Miss America Pageant contestants by Garner, Garfinkel, Schwartz, and Thompson (1980) found that the average body weight of Playboy playmates and Miss America contestants has significantly declined from 1959 onward. Subsequent research cited this finding as evidence for a trend toward a more tubular, less curvaceous shape, or a higher WHR (Morris, Cooper, & Cooper, 1989; Wiseman, Gray, Mosimann, & Ahrens, 1992). Singh (1994c), upon examination of

the Playboy models, found that their WHR's are still within a curvaceous range (.68-.72) indicating that the thin ideal that has become so prevalent in Western culture is not more boyish, just smaller. He suggested that the apparent tubular body shape is due to a lower overall body weight and a smaller upper body torso and not to changes in the lower body torso (Singh, 1994c). More recently, however, Sypeck (2002) found that over time, the overall weight of Playboy centerfolds and other models decreased as did hip size. Since BMI and WHR are somewhat confounded, it makes sense that over time, WHR has increased (more tubular) via hip size becoming smaller. Such findings, however, do not necessarily call into question the idea that males find a low WHR more attractive than a higher one. Models do not accurately represent the general population. Alternately, what is depicted in mostly White cultural media (i.e. an increased WHR) may not represent what African American men find attractive. Furthermore, what is depicted in the media may not necessarily be what men find to be ideal. The possibility remains that men find models attractive due to several factors that include but are not limited to weight and WHR. Such factors may be facial features, breast size, or suggestively posed figures.

Along these lines, research by Furnham, Dias, and McClelland (1998) found that the effect of breast size on attractiveness judgments depended on overall body fat and WHR such that large breasts consistently enhanced the attractiveness ratings of slender and heavy figures by males and females, as long as they had a low WHR (Furnham et al., 1998). This is in accordance with previous research by Singh & Young (1995) which found that the size of breasts did enhance attractiveness, but only if the figure had small

hips. Thus, although the breast size of models may vary across time period, it is not the feature that determines the attractiveness ratings by men. Whether men find large or small breasts attractive, it is WHR that will determine the attractiveness rating given a set of figures that vary along weight and shape dimensions.

Singh's original 1993 findings were cross-culturally replicated with British college students (Furnham, Tan, & McManus, 1997). WHR was found to be the most parsimonious measure of body physical attractiveness. This study improved upon Singh's methodology by having participants rate figures on a 7-point bipolar scale (e.g. from unattractive - very attractive) rather than rank all figures from most to least attractive. Since participants ranked all 24 female figures it is considered a "within subject" design. It allows for comparison of the figures and therefore allows subjects to make more rational judgments without making the experimental manipulation too obvious because of the figures' random order (Furnham et al., 1997). For British male participants, females with high WHRs were judged least favorably.

Henss (1992, 1995, 2000), in all of his studies, used a design that was purely "between participants" where one subject saw only one female figure and could not compare figures by which to gauge ratings. In this manner, participants were not making a rational, calculated judgment. Henss's (1995) study, while using a "between participants" design, also employed the use of parametric tests. He contends that neither between or within subjects design is clearly preferable. Rather, each has its own assets and shortcomings (Henss, 2000). From his findings that a lower WHR was more

attractive than a higher one, he concluded that using photographic stimuli and line drawings yield roughly the same results.

What's More Important, Weight or WHR?

One major inconsistency in the existing literature concerns the relative importance of weight versus WHR in judgments of female attractiveness. Tassinari and Hansen (1998) found evidence that overall body weight rather than WHR was more important in judgments of female attractiveness by both men and women. They deemed the positive association between WHR, fecundity, and attractiveness found by previous research (done primarily by Singh) to be an artifact of a limited stimulus set. By expanding the range of WHRs depicted in Singh's stimulus set, they provided participants with a set of female figures constructed realistically, according to anthropometric norms reflecting the fact that a greater percentage of hip circumference is due to variation in the sagittal plane (Tassinari & Hansen, 1998).

In addition to finding overall weight to be of greater importance in judgments of female attractiveness, the results call into question the "WHR hypothesis" that WHR is fundamentally a sign of reproductive potential, and thus of a sign of mate value. Tassinari & Hanssen (1998) also posit that a WHR of .5 should be ranked as the most attractive relative to other WHRs. Henss (2000) counters this idea with the argument that "For WHR, as for any other morphological trait, there is a certain point, beyond which it appears grotesque, thoroughly unhealthy, and repelling. Consequently, evolutionary

thinking would predict a curvilinear relationship between WHR and attractiveness” (p.510). As of his 2000 study, the location of the optimum beyond which the relationship between low WHR and attractiveness would reverse, remained unknown. Henss (2000) conjectured that the optimum would be at a point that is significantly, but not very much, below the female population mean such that it appears as a slight exaggeration of a sex-typical feature. The present study will help to elucidate where this point lies.

Studies investigating the relative importance of weight versus WHR have led to conflicting results. That weight is of primary importance in mate selection was supported in a study by Tovee, Maisey, Emery, and Cornelissen (1999) that showed that Body Mass Index (BMI) is the primary determinant of sexual attractiveness rather than WHR. It was also suggested that the covariation of apparent BMI and WHR in previous studies led to the overestimation of the importance of WHR in judging female attractiveness. For example, although Tassinari & Hansen (1998) modified the Singh figures by varying waist and hip circumference separately, they did not observe that apparent BMI was changed when Singh altered the waist widths (Tovee et al., 1999). The Tassinari & Hansen (1998) figures were thus similarly flawed: changes in both hip and waist width were correlated with apparent BMI. In any weight category, making WHR lower by enlarging the hips gives the impression of a heavier figure. This covariation was quantified using PAR¹ and can be used to predict Tassinari & Hansen’s (1998) results.

¹PAR, or perimeter-area ratio, is the path length around the perimeter of a figure divided by the area within the perimeter. This ratio correlates very well with BMI ($r = 0.97$, $p < 0.0001$) and provides an accurate and reliable visual proxy of BMI (Tovee et al., 1999).

The largest change in PAR occurs with changing hip width because when Tassinary & Hansen altered hip width they also changed the width of the thighs, producing a significant change in PAR at the same time. Not only did they modify PAR within each weight category but they overlapped their weight categories. For example, in their 3 x 3 matrix, the top left-hand figure has a higher PAR than the bottom right hand image of the next weight category up (Tovee et al., 1999).

Tovee et al. (1999) asked British male undergraduates to judge ten images of women from each of five BMI categories: emaciated (below 15), underweight (15-19), normal (20-24), overweight (25-30), and obese (above 30). The figures were drawn from videotapes of consenting women standing in a set pose at a standard distance. All women wore standard outfit of grey leggings and a grey leotard. Images were frame-grabbed and stored as 24-bit colored pictures. High-resolution, color photographic images were used to improve upon the use of mere line drawings and provided a more realistic image for participants to rate the figures (Tovee et al., 1999). The women who participated had WHR's in the range of .68-.98. Although this was range was found to be representative of women according to a survey of Finnish women (Marti, Tuomilehto, Salomaa, Kartovaara, Korhonen, & Pietinen, 1991) it seems to depict a restricted range of WHR's given the varied sizes and shapes of women. It is also a much smaller range than was used in the Tassinary & Hansen (1997).

Results of the Tovee et al. (1999) found that BMI is the primary determinant of the attractiveness of female bodies and accounts for more than 70% of the variance in

their analyses, whereas WHR accounted for about 2% . They also showed that PAR, or perimeter-area ratio, provides an accurate cue to BMI, upon which attractiveness may be judged. It was asserted that the importance of WHR found in previous studies was an artifact of covarying WHR with apparent BMI.

BMI may have an advantage as a cue for mate selection because of its close correlation with health and fertility (Manson, Willet, Stampfer, Colditz, Hunter, Hankinson, Hennekens, & Speizer, 1995; Reid & Van Vugt, 1987; Lake, Power, & Cole, 1997). Hartz, Rupley, & Rimm (1984) found both WHR and BMI to be positively related to irregularity in menstrual cycles. They are both predictors of conception in an artificial insemination program, as well (Zaadstra, Seidell, Van Noord, Velde, Habbema, Vrieswijk, & Karbaat, 1993). Tovee et al. (1999) argue, however, that the relationship of WHR with fertility is weaker than that of BMI with fertility and that is perhaps why WHR has been a poor predictor of attractiveness. Further evidence for this conclusion stems from the observation that “there is considerable overlap in the WHRs of populations of normal women and anorexic patients” (Tovee, Mason, Emery, McClusky, & Cohen-Tovee, 1997) and that “a woman with an effective fertility of zero can have the same WHR as a woman with normal fertility” (Tovee et al., 1999, p.216). Tovee and colleagues (1999) posit that such evidence of the importance of BMI is suggestive of a hierarchy of cues that determine the value of a mate, with BMI being the first “screening criterion” and WHR and other body shape cues playing secondary roles in discriminating among the most attractive individuals.

The studies to date, although compelling, are limited by the lack of diversity of participants. Tassinary and Hansen's (1998) sample consisted of predominantly white American college students (personal communication, 1/00). For African American college students, as well as non-college attending males, WHR may still be a more important feature when judging female attractiveness. Despite this and other evidence that a preference for a low WHR may not be as universal as previously believed, this preference could be a "second pass filter" rather than the "first initial filter" proposed by Singh (Wetsman & Marlowe, 1999). A study of the Hadza in Tanzania led Wetsman & Marlowe (1999) to suggest that weight may be more important to ensure the health of a partner; it is not until there is surplus food available that WHR, and thus fertility, would play a role.

If the hypothesis that BMI serves as an initial, wide-pass filter holds true, then in an evolutionary framework, all men, regardless of culture should choose women with a BMI in a healthy range. Then, WHR may differ, according to various cultural norms and personal preferences. Finding that one cultural group prefers women with a higher BMI would undermine the Tovee et al. (1999) conclusion that BMI is of primary importance in judging potential mates and female attractiveness. Also, finding that African American males prefer a higher BMI would refute Singh's claim that African American men do not find overweight women attractive.

Such a hierarchy lends even greater support to the hypotheses of the current study: A higher acceptance of larger body sizes by African American men has been suggested

(Rucker & Cash, 1992; Thomas, 1989). If this is true, then they should also find heavier women with low WHRs to be relatively more attractive than heavier women with high WHRs. In addition, it should be expected that African American men will select ideal female figures with a slightly lower WHR than their White American counterparts due to cultural norms and values.

Acculturative Factors and Ethnic Identification

An additional factor that may account for the discrepant results is the concept of acculturation. Acculturation may play a large role in the expression of different ideals between community and college samples of men. It has been suggested that the more one subscribes to the values of the mainstream White culture, the more at risk African American females become for eating disorders and maladaptive eating habits (Abrams et al., 1993; Crago, Shisslak, & Estes, 1996; Osvold & Sadowsky, 1993; Rucker & Cash, 1992). As such, a college population of African American women at a traditional white institution may be more likely to subscribe to mainstream ideals than would women of college age that do not attend (Rucker & Cash, 1992).

Abrams and colleagues (1993), for example, demonstrated that African American women who embrace the White mainstream culture also endorse eating disorder-related attitudes. Furthermore, scores on the pre-encounter subscale² of the Racial Identity

²In the pre-encounter stage, African Americans view the world from a non-Black, pro-White frame of reference. According to Harris (1994), "It is possible that this stage of identity is associated with positive evaluations of physical appearance because of fewer

Attitudes Scale, a measure of stage of racial identity, were significantly positively correlated with Restraint, Fear of Fat, and Drive for Thinness, indicating a role for racial identity in eating pathology. Thus, African American women who have not yet contemplated their identity as Black women are more likely to engage in maladaptive eating behaviors. A woman in the Pre-Encounter stage probably has fewer associations with other African Americans and participates in fewer activities and institutions characteristic of African American culture. The activities and interactions of an African American woman in this stage are likely to expose her to mainstream values which include ideals of thin women and a message of the acceptability of maladaptive eating practices.

Similarly, Harris (1994b) corroborates previous research finding African American women to be more satisfied than White American women with discrete body areas and to express a higher expressed ideal weight. It was also found that African American women with Pre-encounter attitudes perceived themselves as socially competent and expressed a lower ideal body weight. Thus, African American women who have not yet undergone the process of becoming identified with their own culture tend to endorse values similar to those expressed by White American women.

If one generalizes findings of a positive relationship between pro-White attitudes and body image pathology to male preferences for females, it seems likely that men who

experiences that lead these women to view the physical self through the cultural lens of mainstream America.” (p. 100).

are more immersed in White culture, will select thinner ideal figures than their counterparts who subscribe to pro-Black viewpoints.

Differences in the levels of acculturation of college and community samples may also sources of observed differences in within-group preferences for female figures. Like women, a community sample of men may have different values and ideals regarding body size and shape, especially given the higher prevalence of overweight women in community versus college populations. Although not immune from the values subscribed to by college men, non-attending men of the same age may be less invested in the thin female ideal, especially when considering that the pool of eligible women that they encounter are more likely to be overweight. A higher prevalence of overweight and obesity in the general population than in a college sample would perhaps narrow the pool of women considered eligible by men in the community. If many of the women men encounter are overweight, choosing a woman on the basis of overall body weight merely becomes a matter of degree.

According to Robinson & Andersen (1985), the higher rate of obesity for American racial and ethnic minority women can be explained by their over-representation in the lower socioeconomic levels. Miller and Downey's meta-analysis (1999) found that being overweight is more common among those in a lower SES and extended that to indicate that being overweight is less prevalent among college students than among people of college age, in general.

Acculturative factors have yet to be studied thoroughly with regard to between

and within ethnic group differences in body size preferences. Powell and Kahn (1995) sought to understand differences between African and White American women's desires to be thin. They demonstrated ethnic differences in perceived social pressures to be thin through the responses of African American males indicating both greater willingness to date heavier women and thinness to be less important in the women they date than did the White American male subjects. However, their efforts to evaluate the role of cultural identification in racial differences in ideal body size proved unsuccessful due to the lack of variance in their sample: almost all African American participants felt very much a part of black culture and socialized predominantly with other African Americans (Powell & Kahn, 1995). If studied with a large and varied sample, degree of acculturation may be demonstrated to account for much of the differences in expressed ideal body size within ethnic groups. Young, Ekeler, Sawyer, and Prichard (1994), upon examining subgroups of African American students attending predominantly white universities, found heterogeneous attitudes and backgrounds, as well as different levels of acculturation.

Cunningham et al. (1995) offers an intriguing explanation for ethnic differences that complements the idea that college attendance may impact expressed ideal body size, namely through resource availability. He posits that if African American judgments of attractiveness were determined by subscription to mainstream, White ideals, it is unlikely that such differences in judgments would apply to facial features only. In all types of response formats, African American men indicated greater attraction to heavier figures than did White men, including higher ideal weight and a preference for a figure with

larger buttocks. Cunningham (1995) further suggests that “Preference for a slightly heavier body may reflect both lingering uncertainties concerning resource availability in the African American community and a disavowal of unhealthy White anorexia” (p. 274).

Such an ecological perspective depicting male preferences as an issue of limited resources is more relevant for a community sample of men than for a college sample where all students have above average prospects of garnering resources. Miller and Downey (1999) posit, “...college students are being groomed to occupy relatively high-status roles in society” (p.77). Thus, as the potential to garner resources increases, male preferences for female body size and shape may begin to parallel those of the dominant, White society. Caution, however, must be exercised in interpreting the socioeconomic status of college students due to the availability of financial aid. Munford (1994) unexpectedly found a higher social class level in her community sample and explained it by the ease with which students of all economic backgrounds can go to college.

One major limitation of the Singh (1994a) study that found no differences in preferences for female body size and shape across ethnicity was that the college sample may not have been representative of African American men in general. It is possible that the Singh (1994a) sample was more acculturated and therefore more attuned to white norms of female beauty. Using both a community sample of African American men in addition to the standard African American college sample at a white institution would be helpful in determining if preferences for female body size and shape vary by both ethnicity and by degree of acculturation. The present study will address this limitation.

The Assignment of Personality Characteristics to Female Figures

Asking participants to assign descriptors and adjectives to female figures of various weights and WHRs has been common in studies of male preference. In a multidimensional unfolding analysis, Singh (1993) found white American men to rank the normal weight female with a 0.7 WHR to be closest to descriptors of sexy, attractive, and good health. The normal weight female with a WHR of 0.9 was located closest to desire for and capability of having children. Underweight female figures with WHR's of 0.7 and 0.8 were associated only with youthfulness. The underweight figures with high WHR's were perceived as neither youthful nor healthy (Singh, 1993). Overall, neither overweight nor underweight are perceived as attractive, and such figures were designated as having low reproductive potential. Another study using the Singh stimulus set found that White male and female participants chose the underweight figure with a WHR of 0.7 as most attractive and chose the normal weight figures as having the greatest likelihood of being pregnant (Flood, 1995).

In another study of characteristics associated with various female weights and WHRs, Singh (1994a) found that White American and Hispanic college males found neither overweight nor underweight figures attractive even when such figures had a low WHR. Using multidimensional unfolding analysis, the variables of attractiveness, sexiness, and health were located close to each other. Except for the normal weight figure with a WHR of 1.0, only normal weight figures were located closest to 9 out of 14

attributes. Only overweight figures with WHR's of 0.9 and 1.0 were located close to the attributes of faithfulness and kindness.

Very few studies have examined preferences of non-white males, nor have they asked diverse participants to assign descriptors to figures of various shapes and sizes. Singh (1994c) found that African American and White American college males ranked normal weight figures with 0.7 and 0.8 WHR's as more attractive and desirable for long-term relationships and neither underweight nor overweight figures were assigned high ranking for these variables, regardless of WHR. These results, contrary to previous research, were used to conclude that African American males, like their white American counterparts, subscribe to the same physical ideal for females. Similarly, Singh and Luis (1995) found African American and Indonesian men to rank figures with a normal weight and low WHR as more attractive and healthy. In this study, the overweight figures, although ranked as honest, faithful, kind, and understanding, were not ranked as very attractive.

The above research, using the Singh stimulus set, was limited in that only college students were used. College students, especially those attending predominantly white universities, are more likely to subscribe to mainstream ideals of female thinness. Additionally, Singh's restricted range of WHR's did not allow for a true comparison of figures along the characteristics employed.

Most recently, Barber (1999) found that more curvaceous figures were seen as higher in reproductive potential and lower in career potential; underweight women were

seen as lower than average in reproductive value and normal weight women as higher in reproductive value. He concluded that the figures rated as most attractive were also seen as the least competent. This study was done with a limited number of participants. Additionally, the ethnic composition of the group was not described. If a diverse subject pool were used, African American subjects would be less likely to rate very curvaceous figures as lower in career potential given their higher acceptance of heavier women. Men in the community sample are also likely to view heavier women more positively and thus see them as competent in terms of career potential.

Ethnic Differences in Sex Role Identification

Research using the Bem Sex Role Inventory to examine sex role and gender identity is substantial. The Bem Sex Role Inventory has been shown to be a valid indicator of current cultural definitions of masculinity and femininity and of whether the BSRI's cultural definitions of masculinity and femininity differ among cultural groups. For males, de Leon (1993) found that males from four different ethnic groups (Anglo, Puerto Ricans in Puerto Rico, Puerto Ricans in the US, African Americans) did not score significantly different from each other on the masculine scale of the BSRI whereas on the feminine scale, Puerto Rican men in Puerto Rico and in the US scored higher on the femininity scale than Anglos and African Americans. Anglos and African Americans, however, were not significantly different from each other on the BSRI feminine scale.

More detailed investigations into the gender role identity of African American

males found that African American participants were more androgynous than White American participants (Harris, 1996). Millham and Smith (1981) suggest that masculine traits such as competence, ambitiousness, and competitiveness, are important for success among both men and women in African American culture, which could not afford the luxury of limiting the competition for resources to one sex alone. Sharing responsibility for the home is also not limited to women (Millham & Smith, 1981; De Leon, 1994). Previous research on African American females support such findings for gender identity differences in females (Binion, 1990). This androgynous gender role has been purported to partially account for the lowered incidence of eating pathology among African American women: Kimlicka, Cross, and Tarnai (1983) report findings that support androgyny as a buffer against eating pathology. They found the relationship between body shape satisfaction and self-esteem to be especially powerful for women who describe themselves as traditionally feminine on the BSRI.

Harris (1994) cites Lewis (1975) to help explain why gender roles may be less polarized in African American culture: It may have to do with more general cultural notions that good and bad, wise and foolish, up and down, are inseparable aspects of life, and not actually dichotomies. Along these lines, gender roles may be adopted that would be characterized as both masculine and feminine, depending on factors, including but not limited to sex, such as age or birth order.

In an effort to determine how representative of the African American population the observed gender patterns are, Harris (1996) examined sex role identity in 1740

African American and Anglo-Americans. Demographic characteristics such as geographic region, marital status, and education levels were also noted. The results showed that African American males and females have an equal propensity to see masculine traits as self-descriptive, whereas Anglo-American males see masculine traits as more self-descriptive than do Anglo-American females (Harris, 1996). Much of the variation between the gender-role identity scores of African and Anglo-Americans is accounted for by the tendency of African American women to score significantly higher than Anglo-American women on the BSRI masculinity measure. So not only was masculine behavior considered appropriate for males in Anglo-American culture, but feminine behavior was shown to be characteristic of both African American men and women (Harris, 1996). Also found in this study, is that younger African American men have notions of masculinity similar to those of Anglo American men and may adopt more traditional views of gender roles when they marry. A culture-specific gender role inventory may be warranted, given the somewhat different definitions of masculinity and femininity across cultures (Harris, 1994;1996).

If men do hold non-traditional gender-role attitudes, do their views translate to preferences for opposite sex physical characteristics? Perhaps men who espouse fewer typically masculine attitudes prefer a woman with a higher WHR than one with a low WHR who appears curvaceous and “traditionally” feminine.

It is hypothesized that although gender-role identity will not solely determine male preference for WHR but, rather, moderate the relationship between ethnicity and body

type preference. Furthermore, taking into account the Harris (1996) findings, it is hypothesized that androgynous men of both ethnicities will prefer female figures that appear androgynous (high WHR). Although the least acculturated African Americans should prefer heavier female figures with a low WHR, an androgynous gender role may moderate this relationship.

The Present Study: Rationale and Purpose

Despite the substantial literature on the protective factors contributing to a lower rate of eating disorders and body image pathology in African American women, there is scant information concerning male preferences as a protective factor. Male preferences have been assessed, as have female perceptions of those preferences, but such investigations have been limited.

Although most relevant studies found that African American males prefer larger figures, it is unclear how female WHR influences may interact with such preferences. Singh (1994a) found African American men, like white American men, find heavier women unattractive. This runs contrary to other literature describing an attitude of acceptance and general attraction to heavier women by African American men. This study attempted to demonstrate ethnic differences in male preferences for female body size by improving upon the set of female silhouettes used by Singh in several research investigations by expanding the range of WHR presented to participants. The modified set of stimuli consisted of the original Singh figures, but also included figures with a

WHR of .50 as well as figures with WHRs in increments of .05 through 1.0 so as to expand the range of figures along the curvaceous-tubular dimension from which males could choose. In addition, the set of stimuli constructed by Tassinary & Hansen (1998) was presented for replication. This set was not altered because the range of WHRs was deemed appropriately broad and was used to replicate the results found by Tassinary & Hansen, that BMI is a more potent indicator of female attractiveness than is WHR. Although both sets have been shown to have limitations, in the present study they were used with a more diverse population, in order to replicate results found earlier and to elucidate the nature of differences between ethnic groups.

Furthermore, acculturative factors have only been studied with respect to women's body image and eating pathology. This study attempted to clarify the effect of acculturation on male preferences for females' body sizes and shapes by including in the sample, African American and White American males from two locations: a predominantly white, urban university and the Washington, D.C. community.

This study also addressed gender role identity and the ways in which it may moderate ethnic differences in preferred female weight and WHR.

Hypotheses

1. African American men will choose an ideal figure with a WHR that is lower than that of their White American counterparts.
2. African American men will choose a heavier ideal figure than will White

American men, irrespective of WHR. Furthermore, the community subgroup within each ethnic group, will choose a heavier figure than their college-attending counterparts.

3. African American college males will be more acculturated to White, mainstream society than will their community counterparts. African American participants who demonstrate high levels of acculturation will choose ideal figures, most similar to those of White American men, with respect to weight and WHR.

4. African American and White American males will assign the presented figures to the adjectives in a way that is consistent with respect to their weight and WHR preferences. Specifically, the perception of various figures with respect to descriptors will be consistent with each subgroup's hypothesized preferences for the adjectives that relate to physical appearance and physical behaviors (attractive, sexy, healthy, fertile). All males will choose similar body weights and WHRs for adjectives such as youthful and athletic because these are characteristics whose physical embodiment is likely to be agreed upon by most people, regardless of ethnic or cultural background. No specific hypotheses will be offered regarding the new adjectives such as promiscuous, trustworthy, intelligent, assertive, and nurturing.

5. Men who display androgynous sex role identities will be more likely to choose women with a higher WHR. African American males will be more androgynous than White American males on the whole.

CHAPTER TWO

METHODS

Participants

The participants were 103 White American (n=54) and African American (n=49) males. Twenty-four African American males were college students, most of whom were students at American University. The remaining twenty-five males in the African American sample were members of the Washington, DC metro community. Thirty-five of the fifty-four White American males were college students, all at American University, with the remaining nineteen males being members of the community.

The student participants were recruited from American University introductory psychology classes and through campus-wide emails, signs, and advertisements in the campus newspaper. Participants from the Washington, DC community were recruited through signs and newspaper advertisements. Student participants received either one extra course credit or were entered in a raffle drawing for one of two fifty-dollar prizes. Community participants received \$10 per hour of participation. All participants self-identified their racial groups. Although there no age cutoffs for college participants were specified in advance, the data points were assessed for outliers. Data collected on eight participants were excluded from analyses: one Hispanic participant, three participants who could not complete the study (two African American participants and one White

American participant), two White American participants whose self-identified sexual orientation was homosexual, one White American participant who was 56 years old and attending college full-time, and one participant who had participated in the study at an earlier date.

Materials

Demographic Questionnaire

This questionnaire was constructed by the author to assess the background of the participants. It assessed age, ethnicity, and current or most recent partner's estimated height and weight. It also asked questions about the participants' parents. Separate and analogous questions were asked about the individual's mother/primary female guardian and father/primary male guardian. For each parent, participants were asked to report education and occupation, number of years in the work force full-time during the participant's lifetime, number of children and current marital status (Appendix A). The answers were used to determine socioeconomic status (SES) according to the Hollingshead Four-Factor Scale of Socioeconomic Status Hollingshead (1975). The four factors assessed by the Hollingshead index are: education, occupation, sex, and marital status. Because all participants were single, scores were based only on occupation and educational level. Scores were computed by a formula: $(\text{Occupation} \times 5) + (\text{Education} \times 3)$. Here, the individual's occupation receives a rating of 1-9 based on a manual listing various occupations' levels of financial and social prestige, while the individual's

education is rated from 1-7 on the basis of how much education was completed. Final scores fall into one of five social class categories ranging from 1 = lowest to 5 = highest.

African American Acculturation Scale (AAAS-33)

The African American Acculturation Scale (Landrine & Klonoff, 19) measures the extent to which African American individuals participate in the cultural traditions, beliefs, assumptions, and practices of the dominant White society or remain immersed in their own cultural traditions. The total score is the sum of the scores on each factor (all 33 items). The short form (AAAS-33) was developed in response to researchers' demands for a briefer version of the scale. The factors have theoretically sensible, but small inter-correlations with each other. Moderate to large correlations between each subscale and the total score were found, because the total score consists of the sum of the scores on the subscales. The short form has good concurrent and group differences validity. The two versions of the test are highly correlated ($r = .94$). The ten subscales are: Preference for Things African American (media, arts); Religious Beliefs and Practices; Traditional Foods (knowledge/ preparation/consumption); Traditional Childhood; Superstitions; Interracial Attitudes; Falling-Out (knowledge of the culture-bound syndrome); Traditional Games (knowledge of, playing); Family Values; and Family Practices. For the purposes of statistical analysis, only the participants' total scores were used.

Bem Sex Role Inventory (BSRI)

The Bem Sex Role Inventory assesses masculinity and femininity through 20 items on a Masculinity Scale and 20 items on a Femininity scale. The revised scale (Bem, 1981) better accounts for changes in gender-role orientations. The BSRI was found to be a valid instrument for assessing gender roles (Holt & Ellis, 1998) and “American” definitions of masculinity and femininity (Harris, 1996), but may not be as valid an indicator for African Americans and Hispanics (Harris, 1996). Participants were asked to respond to 20 items on both a masculine scale and a feminine scale, and also to 20 neutral items of the BSRI in accordance with current procedures (Pedhazur and Tetenbaum, 1979; Bem, 1981a; Bem, 1981b). A masculinity and femininity score were obtained for each participant. Cutoff scores, based on sample medians were then used to place each participant in one of four sex role categories: masculine, feminine, androgynous, or undifferentiated.

Height and Weight

Body weight was measured in light clothing to the nearest 0.5 lb (0.2 kg) with a calibrated balance-beam scale. Height was self-reported by participants. Body mass index (BMI) was calculated as weight (kg)/height (m)².

Stimuli

The original stimuli used by Singh (1994a), varied along 3 levels of body weight and four levels of WHR. The range of WHRs was from .70 to 1.0, which encompasses some of the types of figures that occur in the general population, but does not account for females with very curvaceous figures (WHRs in the .50 to .70 range). The new stimuli varied on 11 levels of WHR and on 3 levels of body weight. The original figures were reproduced and enlarged to appear more salient. The new figures were constructed to look exactly like the original figures, but with new WHRs. The new stimuli included a wider range of WHRs but maintained the three overall body weight categories as used in the Singh studies. The underweight women represented a five feet five inch woman of 90 pounds. The normal weight figures represented a woman of five feet five inches and 120 pounds. The overweight figures depicted a woman of 5 feet five inches and 150 pounds. All features other than WHR were held constant and were arranged on a single poster for simultaneous inspection. In addition, there were three additional posters depicting the figures in each body weight category separately so that participants also chose a preferred WHR within each weight category. The order of the figures was randomized on all posters before the onset of the study.

The Tassinari & Hansen (1998) stimulus set was similarly presented. These figures represented a woman of five feet four inches in height with varying waist and varying hip sizes. Like the new figures based upon the original Singh stimuli, the

Tassinary figures were presented first altogether for simultaneous inspection² and then within each body weight category so the participant chose a preferred WHR within each weight category. Again, the order of the figures within each stimulus set was randomized. Participants were asked two question for each set of figures presented: “Which figure represents your ideal female figure?” and “Which figure represents your least favorite female figure?” The participants were also asked to assign descriptive adjectives to the figures depicting the “most” and “least” attractive, sexy, fertile, trustworthy, promiscuous, youthful, kind, and others. See Appendix B for reproductions of the stimuli used and the accompanying questions.

Procedures

Participants were instructed that they were to participate in a study looking at the relationship between physical appearance and personality characteristics. As an incentive for participating, some students received course credit and the remainder of the students and the community members either received \$10 or the opportunity to enter a raffle to win one of 2 \$50 cash prizes. The participants were asked to respond to a packet of questionnaires. Upon completion of the questionnaires, they were weighed. Following completion of the study, all participants were debriefed.

²Flood (1995) found that presenting the figures alone, one at a time, so that participants could not make comparisons with the other figures, resulted in more positive ratings for figures overall. This study maintained Singh’s original presentation format for reasons of consistency and time considerations.

CHAPTER THREE

RESULTS

Statistical Analyses

Descriptive statistics were computed for demographic variables. Group differences on continuous measures were examined using multiple analysis of variance (MANOVA) and analysis of variance (ANOVA). Group differences on categorical measures were examined using chi-square and Mann-Whitney tests. All analyses were examined using an alpha of .05 and 95% confidence intervals.

Descriptive Data

Descriptive data on several variables including age, height, weight, Body Mass Index scores, and acculturation scores are presented in Table 1. A MANOVA, examining the variables age, height, and weight, indicated significant group differences $F(9, 281) = 11.821, p < .01$. Follow-up ANOVAs indicated significant differences between groups on the variables age, $F(3, 97) = 34.864, p < .01$ and weight, $F(3, 97) = 2.834, p < .05$. Tukey's constant was used to examine group differences in the post-hoc multiple comparisons. The age of White college males was significantly different from that of both White community males (mean difference = -11.81, SE = 1.95, $p < .01$) and African American community males (mean difference = -16.32, SE = 1.77, $p < .01$). Also, the age

Table 1.
Descriptive data for White and African American college and community subjects

	<u>Age</u>	<u>Height</u>	<u>Weight</u>	<u>BMI</u>	<u>Acculturation</u>
X (SD) White college	19.71(3.14) ^a (N=35)	70.44(3.40) (N=35)	168.94(31.87) ^c (N=34)	23.85(3.29) ^e (N=34)	
X (SD) White Community	31.11(6.63) ^b (N=19)	70.13(1.94) (N=19)	172.95(22.86) ^c (N=19)	24.73(2.96) ^e (N=19)	
X (SD) African American college	21.39(6.65) ^a (N=23)	71.27(2.37) (N=22)	180.70(30.70) ^c (N=23)	25.01(4.40) ^e (N=22)	119.50(30.31) (N=20)
X (SD) African American community	35.62(10.23) ^b (N=26)	70.88(3.45) (N=26)	190.31(28.20) ^d (N=26)	26.68(3.59) ^f (N=26)	118.15(26.63) (N= 20)
Total	26.20(9.64) (N=103)	70.68(2.97) (N=102)	177.78(30.00) (N=102)	25.00(3.69) (N=101)	118.78(28.17) (N=40)

Note. X = Mean, SD = standard deviation, N = number of subjects

a = no statistically significant difference at p = .01

b = no statistically significant difference at p = .01

c = no statistically significant difference at p = .05.

e = no statistically significant difference at p = .05

Table 1. (Continued)
Descriptive data for White and African American college and community subjects

	<u>SES Level</u>
X (SD) White college	3.50(.51) (N=32)
X (SD) White Community	3.56(1.03) (N=16)
X (SD) African American college	3.62(.50) (N=21)
X (SD) African American community	3.22(.81) (N=22)
<hr/> Total	3.47(.70) (N=91)

of the African American college sample differed significantly from that of both the White community sample (mean difference = -9.56, SE = 2.13, $p < .01$) and the African American community sample (mean difference = -14.07, SE = 1.97, $p < .01$). There were no significant differences in age between the White American and African American community samples ($p = .132$) nor between the White American and African American college samples ($p = .623$).

In addition to significant age differences, Tukey multiple comparisons also revealed significant weight differences between subgroups. The mean weight (measured in pounds) for White college males was 168.94 ($n = 34$) as compared with 190.31 ($n = 26$) for African American community males. Furthermore, the correlation between age and weight was statistically significant ($r = .22$) at $p < .05$ and is consistent with the reality that the majority of individuals gain weight as they age. Therefore, age and weight were used as covariates in subsequent analyses.

Additionally, significant differences were found in the Body Mass Index (BMI) scores amongst participants, consistent with the differences found in the mean weights of the participants. The significant differences were found using an ANOVA, $F(3, 97) = 3.11$, $p < .05$. Tukey's constant was used to examine group differences in the post-hoc multiple comparisons. Specifically, the mean BMI of White American college males was significantly different from that of African American community males (mean difference = -2.83, SE = .93, $p < .05$). In terms of BMI category, only 26.9% of African American community males were of normal weight as compared with 61.8% of White American

college males, 57.9% of White American community males, and 68.2% of African American college males. Conversely, 73.1% of African American community males were either overweight or obese, whereas only between 32% and 42% of the other participants were in these categories.

For SES category, there were no significant differences among participants, according to an ANOVA test. Overall, the mean SES category was 3.47(.70), indicating a middle class position. SES did not differ between ethnic groups, nor were weight and SES significantly correlated as would be expected by the fact that individuals with heavier body weights are over-represented in the lower socioeconomic categories.

Hypothesis 1

The preferences for participants' ideal and least favorite WHR were tested using a Mann-Whitney, because with 11 levels for the Singh figures, and 5 levels for the Tassinary figures, one can assume approximate continuity. Furthermore, the distribution of these preferences was not normal, as indicated by Kolmogorov-Smirnov tests of normality. See Table 2 for these scores. Follow-up t-tests for proportions were used to clarify the significant differences between groups for each WHR level.

Singh Figures

As expected, African Americans chose an overall ideal figure with a WHR that was lower than that of the overall ideal figure chosen by White American men. For the

Table 2

Results from Tests of Normality for WHR Preferences

	Statistic	<u>Kolmogorov-Smirnov^a</u>	
		Degrees of Freedom	Significance
Overall Singh Favorite	.169	103	.000
Overall Singh Least Favorite	.182	103	.000
Singh Favorite Light	.327	103	.000
Singh Least Favorite Light	.357	103	.000
Singh Favorite Moderate	.399	103	.000
Singh Least Favorite Moderate	.424	103	.000
Singh Favorite Heavy	.367	103	.000
Singh Least Favorite Heavy	.346	103	.000
Overall Tassinary Favorite	.206	103	.000
Overall Tassinary Least Favorite	.186	103	.000
Tassinary Favorite Light	.204	103	.000
Tassinary Least Favorite Light	.280	103	.000
Tassinary Favorite Moderate	.235	103	.000
Tassinary Least Favorite Moderate	.311	103	.000
Tassinary Favorite Heavy	.339	103	.000
Tassinary Least Favorite Heavy	.339	103	.000

^a Lilliefors Significance Correction

Singh figures, the difference between African Americans' and White Americans' overall ideal WHR was significant, $U = 934.000$, $p < .01$. For 71.3% of African Americans, an overall ideal figure with a low WHR was chosen as compared with 50.00% of White Americans. By comparison, 33.4% of White Americans chose a moderate WHR, while 20.4% of African Americans did. Finally, 16.8% of White Americans chose an overall ideal figure with a high WHR (tubular) as compared with 8.2% of African Americans. Here, there was more consensus among African Americans than White Americans on ideal WHR. For least favorite WHR, no significant differences were found between ethnic groups in terms of individuals' overall least favorite WHR for the Singh figures ($U = 1063.50$, $p = .081$). In fact, 53.70% of White Americans least liked a high WHR compared with 67.35% of African Americans, while 29.63% of White Americans least liked a low WHR compared with 22.45% of African Americans.

Participants were also asked to choose an ideal and least favorite WHR within each of three body weight categories: Light, Moderate, and Heavy. Mann-Whitney tests revealed significant ethnic differences in choice of WHR for Favorite Light ($U = 882.50$, $p < .001$) but not for Least Favorite Light ($U = 1134.00$, $p = .155$). African Americans more frequently chose a low WHR when compared with their White American counterparts. For example, within the Favorite Light category, 69.4% of African Americans chose a low WHR as ideal as compared with 37.0% of White Americans. This difference was significant ($t(102) = 3.28$, $p < .016$). Despite lack of significance for Least Favorite Light, 30.6% of African Americans selected figures with a low WHR

versus 50.0% of White Americans. Looking at the specific figures chosen as Least Favorite Light in the Singh set, 35% of White Americans disliked the lowest WHR the most (.50), whereas only 16% of African Americans did. In this case, the other full 50% of the White American sample selected a high WHR as their Least Favorite Light figure, with no White Americans selecting a moderate WHR as least favorite.

For the moderate Singh figures, there were no significant ethnic differences in participants' choices of an ideal ($U = 1231.00$, $p = .471$) and a least favorite WHR ($U = 1321.00$, $p = .987$). Overall, a low WHR was most frequently selected as ideal (65.0% of total sample), followed by a moderate WHR (24.3% of total sample), followed by a high WHR (10.7% of total sample). For Least Favorite Moderate, 67.0% of the total sample selected a high WHR, followed by 30.1% of the total sample selecting a low WHR as their least favorite.

For the heavy Singh figures, there were no significant ethnic differences in participants' choices of an ideal WHR ($U = 1126.50$, $p = .137$). A low WHR was most frequently selected as ideal for a heavy figure (59.2% of total sample), followed by a moderate WHR (31.1% of total sample), followed by a high WHR (9.7% of total sample). Similarly, for Least Favorite Heavy, there no significant ethnic differences in participants' choices of WHR ($U = 1090.50$, $p = .088$).

However, there was a slight trend toward more White Americans disliking a low WHR than African Americans (38.9% vs 20.4%). Overall, a high WHR was disliked most by all participants (54.4%), followed by a low WHR (30.1% of total sample),

Table 3

Hypothesis One Results for Singh Figures

	<u>%White Americans(N=54)</u>	<u>%African Americans(N=49)</u>
Overall favorite ^a		
Low WHR	50.0	71.4
Moderate WHR	33.3	20.4
High WHR	16.7	8.2
Overall least favorite		
Low WHR	31.5	22.4
Moderate WHR	14.8	10.2
High WHR	53.7	67.4
Favorite light ^b		
Low WHR	37.0*	69.4*
Moderate WHR	38.9	20.4
High WHR	24.1	10.2
Least favorite light		
Low WHR	50.0	30.6
Moderate WHR	0.0	10.2
High WHR	50.0	59.2
Favorite moderate		
Low WHR	63.0	67.3
Moderate WHR	22.2	26.5
High WHR	14.8	6.1
Least favorite moderate		
Low WHR	29.6	30.6
Moderate WHR	3.7	2.0
High WHR	66.7	67.3
Favorite heavy		
Low WHR	53.7	65.3
Moderate WHR	31.5	30.6
High WHR	14.8	4.1
Least favorite heavy		
Low WHR	38.9	20.4
Moderate WHR	13.0	18.4
High WHR	48.1	61.2

a = significant Mann-Whitney, $p < .01$

b = significant Mann-Whitney, $p < .001$

* = significant follow-up t-test for proportions, $p\text{-value} < \text{critical } p\text{-value} = .01$

followed by a moderate WHR (15.5% of total sample). For a concise depiction of the findings for Hypothesis 1, as pertaining to the analyses for the Singh figures, see Table 3.

Also of interest are the percentages of participants in each subgroup choosing the lowest WHR available, .50 for the Singh figures. The range of WHRs on the Singh set of figures was modified so that participants could view a less restricted range of WHRs than in previous research. For African American men, 7.7% (n=2) community males chose a .50 as ideal as did 21.7% (n=5) of African American college students. In comparison, among White American men, 21.1% (n=4) community males chose a .50 as ideal, as did 8.7% (n=3) college males. Overall, the percentages of males in each ethnic group choosing a .50 as ideal was equal (29.4% African American males as compared with 29.8% White American males).

For ideal light Singh figure, 21.7% (n=5) African American college students chose a .50 as ideal, while 11.5% (n=3) African American community participants did so. For White Americans, only 1 in each subgroup chose a .50 as ideal (2.9% for college and 5.3% for community). For ideal moderate, 19% (n=5) African American community males chose a .50 as ideal as compared with 9% (n=2) African American college males. For White American community males, 16% (n=3) chose a .50 as ideal, as did 3% (n=1) of college males. For ideal heavy, 31% (n=8) of African American community males chose .50 as ideal as compared with 9% (n=2) of African American college males. For White Americans, 32% (n=6) of community males chose a .50 as ideal as compared with 11% (n=4) college males.

The hypothesis that African American men prefer a lower ideal WHR is further strengthened when considering the above findings that a greater proportion of African American participants than White Americans chose the lowest WHR as ideal. These results underscore the importance of presenting a broad range of WHRs to participants in subsequent research. A WHR of .50 was endorsed frequently enough to justify its inclusion. In addition, it may represent the lowest WHR that reflects a slight exaggeration of the gynoid fat distribution, without the figure appearing grotesque or distorted.

Tassinary Figures

As expected, for the Tassinary figures, the difference between African Americans' and White Americans' overall ideal WHR was significant, $U = 1030.000$, $p < .05$, with African Americans being more likely to endorse a lower WHR as ideal. Specifically, 6.1% of African Americans chose an overall ideal figure with the lowest WHR (.50), whereas no White Americans did. When looking at the next lowest WHR value (.60), 22.4% of African Americans endorsed this as ideal as compared with only 7.4% of White Americans. The follow-up t-test revealed a significant difference between groups for low WHR ($t(102) = 2.82$, $p < .016$). Although no specific hypothesis was offered for participants' choice of least favorite WHR, significant differences were found between ethnic groups in terms of individuals' overall least favorite WHR for the Tassinary figures ($U = 984.500$, $p < .05$). Although roughly equal percentages of African

Americans and Whites endorsed the three middle levels (.60, .70, and .80) as their least favorite WHR, the proportions of each group endorsing the two extreme WHR's (.50 and .90) were very different. In fact, 27.8 % of White Americans least liked the lowest WHR as compared with 12.2% of African Americans, while 1.9% of White Americans least liked the highest WHR compared with 12.2% of African Americans.

Participants were also asked to choose an ideal and least favorite WHR within each body weight category. Mann-Whitney tests revealed significant ethnic differences in choice of WHR for Favorite Light ($U = 978.000, p < .05$) and for Least Favorite Light ($U = 869.000, p < .001$). African Americans more frequently chose a low WHR when compared with their White American counterparts. For example, within the Favorite Light category, 38.8% of African Americans chose a low WHR as ideal as compared with 22.2% of White Americans. Conversely, a much higher proportion of White Americans chose a high WHR as ideal (38.9%) than did African Americans (18.4%). Logically consistent with these results, for Least Favorite Light, 57.4% of White Americans disliked a low WHR, compared with only 28.6% of African Americans. This difference was significant ($t(102) = -2.95, p < .016$). Conversely, 40.8% of African Americans disliked a high WHR, as compared with only 16.7% of White Americans ($t(102) = 2.72, p < .016$).

For the moderate Tassinary figures, there were no significant ethnic differences in participants' choices of an ideal ($U = 1118.00, p = .143$) nor a least favorite WHR ($U = 1291.500, p = .811$). Overall, a moderate WHR was most frequently selected as ideal

(45.6% of total sample), followed by a high WHR (35.0% of total sample), followed by a low WHR (19.4% of total sample). For Least Favorite Moderate, 61.2% of the total sample disliked a moderate WHR, followed by 21.4% disliking a low WHR, followed by 17.5% choosing a high WHR as their least favorite. (See discussion section for explanation of contradictory results).

For the heavy Tassinary figures, there were significant ethnic differences in participants' choices of an ideal WHR ($U = 1011.00$, $p < .05$). More African Americans chose a low WHR as ideal (20.4%) as compared with White Americans (3.7%). Conversely, fewer African Americans (44.9%) chose a high WHR as ideal as compared with White American (63.0%). This difference was significant ($t(102) = 2.64$, $p < .016$). Similarly, for Least Favorite Heavy, there were significant ethnic differences in participants' choices of WHR ($U = 1015.000$, $p < .05$). Here, 44.9% of African Americans selected a low WHR as least favorite as opposed to 63.0% of White Americans. Conversely, 30.6% of African Americans selected a high WHR as least favorite as compared with 11.1% of White Americans ($t(102) = 2.45$, $p < .016$). For a concise depiction of the findings for Hypothesis 1, as pertaining to the analyses for the Tassinary figures, see Table 4.

Also of interest were the proportions within each subgroup choosing the lowest WHR possible, .50. For overall ideal Tassinary figure, 0% of White Americans chose this WHR as ideal, whereas, 4.3% ($n=1$) of African American college students and 7.6% ($n=2$) of African American community participants did. For ideal light Tassinary figure,

Table 4

Hypothesis One: Mann-Whitney Results for Tassinary figures

	<u>% White Americans(N=54)</u>	<u>% African Americans(N=49)</u>
Overall favorite ^a		
Low WHR	7.4*	28.5*
Moderate WHR	44.4	34.7
High WHR	48.1	36.8
Overall least favorite ^a		
Low WHR	57.4	40.8
Moderate WHR	27.8	30.6
High WHR	14.9	28.5
Favorite light ^a		
Low WHR	22.2	38.8
Moderate WHR	38.9	42.9
High WHR	38.9	18.4
Least favorite light ^b		
Low WHR	57.4*	28.6*
Moderate WHR	25.9	30.6
High WHR	16.7*	40.8*
Favorite moderate		
Low WHR	13.0	26.5
Moderate WHR	48.1	42.9
High WHR	38.9	30.6
Least favorite moderate		
Low WHR	16.7	26.5
Moderate WHR	72.2	49.0
High WHR	11.1	24.5
Favorite heavy ^a		
Low WHR	3.7*	20.4*
Moderate WHR	33.3	34.7
High WHR	63.0	44.9
Least favorite heavy ^a		
Low WHR	63.0	44.9
Moderate WHR	25.9	24.5
High WHR	11.1*	30.6*

a = significant Mann-Whitney, $p < .05$

b = significant Mann-Whitney, $p < .001$

* = significant follow-up t-test for proportions, $p\text{-value} < \text{critical } p\text{-value} = .016$

2.9% (n=1) of White American college participant chose .50 in comparison with 0% of White American community participants, 8.7% (n=2) of African American college participants, and 7.6% (n=2) of African American community participants. For ideal compared with 4.3% (n=1) of African American college and 7.6% (n=2) of African American community participants.

Despite the small number of participants overall choosing the lowest possible WHR, these results lend further support to the hypothesis that African American men generally prefer a lower WHR than their White American counterparts. It also further supports the inclusion of this level of WHR in this and future studies.

Hypothesis 2a

Singh Figures

Consistent with the majority of previous research, there were significant differences in the ideal (chi-square (2) = 17.84, $p < .01$) and least favorite weights (chi-square (2) = 10.36, $p < .01$) between African Americans and White Americans, regardless of college status. Specifically, 69.7% of White Americans selected a light figure as ideal versus only 30.3% of African Americans. Additionally, 30.6% of African Americans selected a heavy figure as ideal as compared with only 6.3% of White Americans. Similarly, for Least Favorite Weight, 66.0% of White Americans chose a heavy figure, while only 34.0% of African Americans did; 65.9% of African Americans chose a heavy figure as ideal, compared with 34.1% of White American males. See Figure 1.

Tassinary Figures

Surprisingly, for the Tassinary figures, there were no significant differences in the ideal ($\chi^2(2) = 4.104, p = .128$) weights chosen between African Americans and White Americans, regardless of college status. However, there were significant White Americans, regardless of college status. However, there were significant differences between ethnic groups with respect to least favorite weight for the Tassinary figures ($\chi^2(2) = 7.55, p < .05$). Specifically, 40.8% of African Americans found underweight women to be unattractive as compared with only 16.7% of White Americans. Conversely, 53.1% of African American found heavy figures to be least attractive, while 72.2% of White Americans did. See Figure 2.

Hypothesis 2b

Singh Figures

Contrary to what was expected, among White Americans, there were no significant differences between college and community subsamples with regard to ideal weight ($\chi^2(2) = 1.08, p = .584$). Similarly, African American men from the community did not choose a significantly different ideal weight than did African American college males ($\chi^2(2) = .42, p = .811$).

Tassinary Figures

Contrary to what was expected, White American men from the community did not choose a significantly different ideal weight than did White American college males ($\chi^2(2) = 1.44, p = .488$). These results, are however, consistent with those obtained

Figure 1.

Ideal and least favorite weight: Singh figures

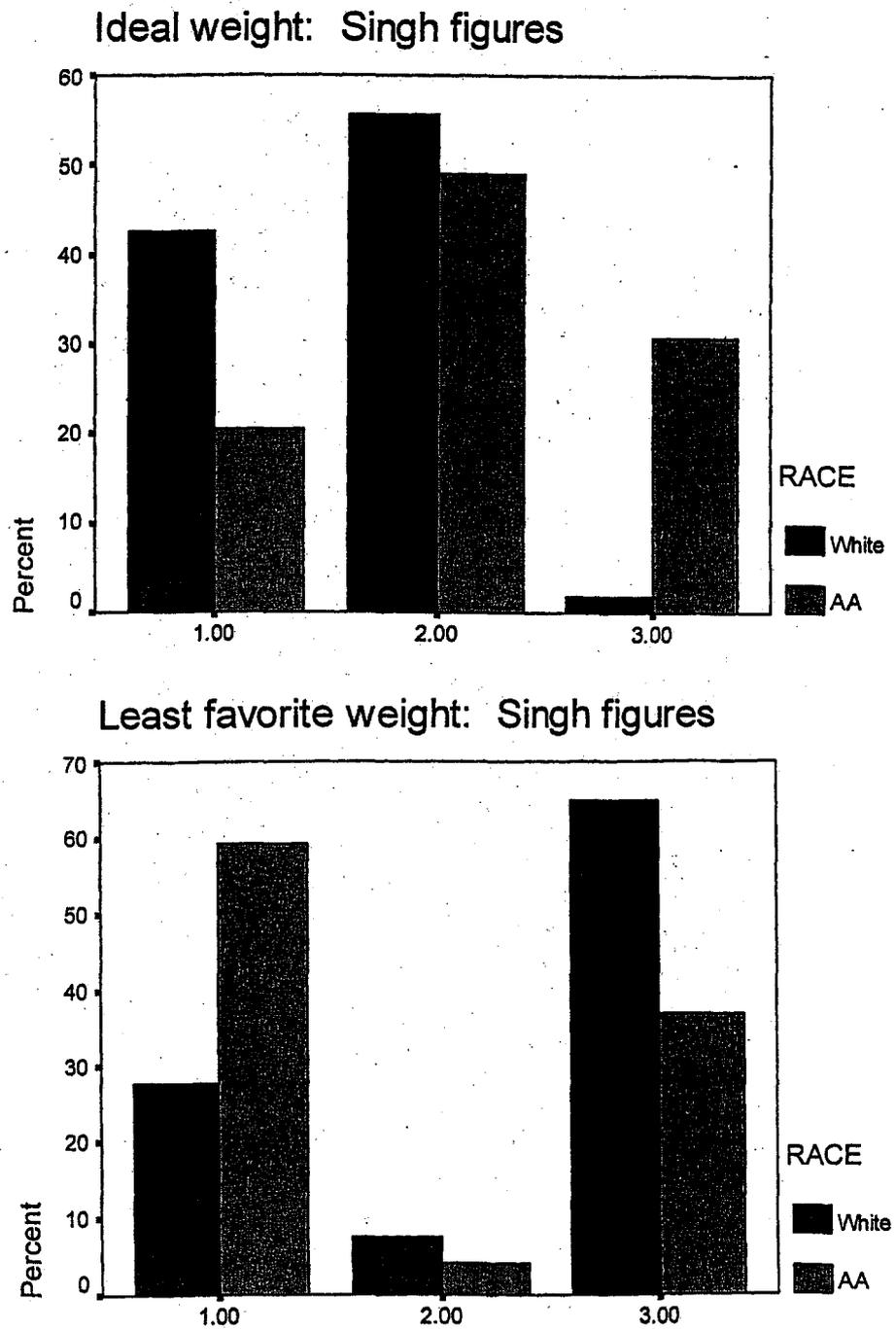
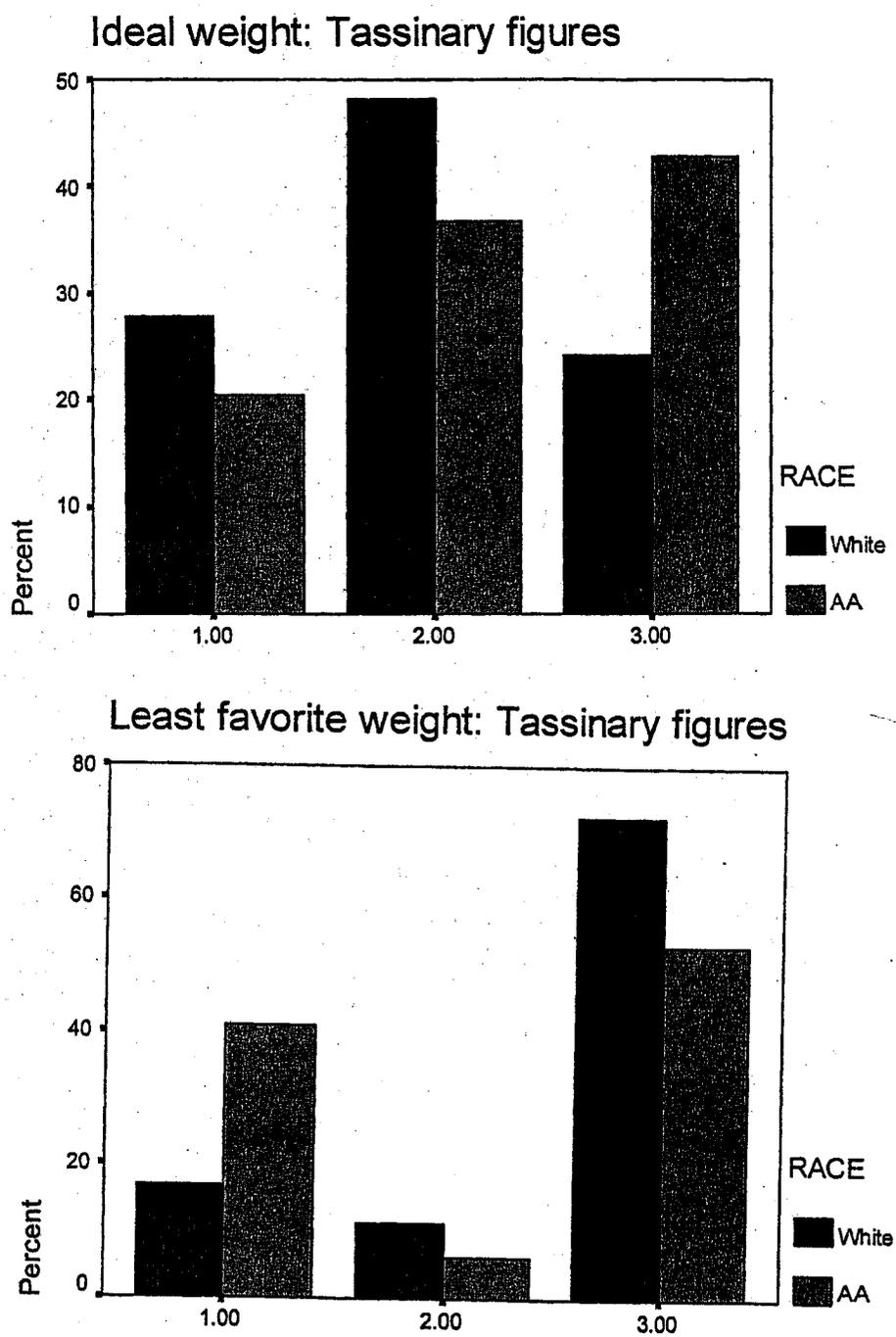


Figure 2.

Ideal and least favorite weight: Tassinary figures



with the Singh figures. Similarly, African American men from the community did not choose a significantly different ideal weight than did African American college males ($\chi^2(2) = 3.86, p = .145$). These results, too, are consistent with those obtained with the Singh figures.

Hypothesis 3

Contrary to what was expected, there were no differences in level of acculturation among the African American participants as measured by the African American Acculturation Scale. The AAAS score is the sum of an individual's score on all 33 items. High scores on the items (high agreement with the statements) indicate a more traditional cultural orientation, and low scores (disagreement with the statements) indicate a more acculturated orientation. For African American college males, the mean score was 119.40, $SD = 30.31$. For African American community males, the mean score was 118.15, $SD = 26.63$. The range for the total AAAS-33 score is 33 - 231. An ANOVA test revealed no significant differences between groups ($F = .019, p = .891$). When age was covaried out, the differences between groups remained nonsignificant ($F = 1.476, p = .232$). The mean score for all African Americans in the Landrine & Klonoff (1995) combined sample (original and new) was 147.80, $SD = 28.26$, which is somewhat higher than the mean obtained here, suggesting that the present study consisted of a slightly more acculturated sample.

In order to assess whether scoring high or low on the acculturation measure impacted the expressed preferences of African American participants, cut-off scores were

used to select out participants with very high or very low scores on the AAAS. The cut-offs, 91 for the low and 147 for the high, were determined by adding and subtracting one standard deviation to and from the mean score. This resulted in 8 low scorers (very acculturated), 4 of whom were college students. It also resulted in 6 high scorers (traditional), 4 of whom were college students. For expressed preferences for weight, chi-square analyses were performed for ideal and least favorite Singh figures, and for ideal and least favorite Tassinary figures. Only expressed preferences for least favorite Tassinary figures differed significantly between those who scored high vs. low on the AAAS (chi-square = 4.38, $p < .05$). Specifically, 87.5% of those scoring low (highly acculturated) disliked a heavy Tassinary figure as compared with only 33.3% of those scoring high (less acculturated). This result is consistent with the notion that the more an African American individual subscribes to White, mainstream values, the more his preferences will look like those of his White American counterparts.

Differences in preferences for expressed ideal and least favorite WHR were assessed using a Mann-Whitney test. There were no significant differences in ideal and least favorite WHR for the Singh nor for the Tassinary figures, according to high and low acculturation scores. Caution must be exercised in interpreting these results and the above chi-square test for differences in preferences according to high and low acculturation scores due to the very small number of participants scoring either very high or very low.

Hypothesis 4a

Singh Figures

Results for the assignment of the descriptors attractive, sexy, and healthy were somewhat consistent with what was expected. For the Singh set of figures, there were significant group differences in “most attractive”(chi-square (2) = 12.26, $p < .01$) and “least attractive” (chi-square (2) = 9.14, $p = .01$) and “most sexy”(chi-square (2) = 14.86, $p = .001$) and “least sexy” (chi-square (2) = 6.12, $p < .05$) with respect to weight. For “most attractive,” 50.9% of White Americans chose a light figure, followed by 45.3% choosing a moderate weight figure. In contrast, 59.6% of African Americans chose a moderate figure as most attractive, followed by 21.3% choosing a light figure and 19.1% choosing a heavy figure. Conversely, 75.5% of White Americans chose a heavy figure as “least attractive” as compared with only 48.9% of African Americans. Another 44.7% of African Americans chose a light figure as least attractive. This stands in contrast with 24.5% of their White American counterparts choosing a light figure as least attractive. These results are consistent with the earlier results from asking participants to choose an ideal and a least favorite figure. African Americans appear to be more accepting of heavier body sizes for women and tend to dislike light or underweight figures.

For “most sexy,” 53.8% of White Americans chose light figures and 40.4% chose moderate weight figures. For African Americans, 57.4% chose moderate weight figures as most sexy. Another 23.4% chose heavy figures as most sexy, followed by 19.1% choosing light figures as most sexy. The results are again, consistent with earlier results,

and highlight the flexibility with which African Americans apply standards of attractiveness to women.

For “most healthy” and “least healthy,” there were no significant group differences with respect to weight. Overall, 71.1% of all respondents chose a moderate weight figure as most healthy. Similarly, only 6.1% of all respondents chose a moderate weight figure as least healthy. Instead, 57.6% of all participants chose a light figure as least healthy followed by 36.4% choosing a heavy figure as least healthy. With respect to WHR, there were no significant ethnic group differences for “most healthy” and “least healthy.” Overall, 43.4% of all respondents chose a low WHR, followed by 39.2% choosing a moderate WHR. Conversely, for “least healthy,” 52.5% of all respondents chose a high WHR, followed by 33.3% choosing a low WHR.

For the descriptors “attractive” and “sexy,” there were mixed results regarding significant ethnic group differences with respect to WHR. For “most attractive,” there were significant differences by ethnic group ($U=960.000$, $p<.05$). Specifically, 49.1% of White Americans chose a low WHR as most attractive as compared with 70.2% of African American participants, followed by 37.7% choosing a moderate WHR as most attractive as compared with 25.5% of African American participants. Although there were no significant differences for “least attractive,” 64% of all respondents chose a high WHR as least attractive, followed by 23% choosing a low WHR as least attractive. For “most sexy” and “least sexy” there were no significant differences by ethnic group with respect to WHR. In fact, 78.8% of all respondents chose a low WHR, followed by 18.2%

choosing a moderate WHR. Conversely, for “least sexy,” 69.7% chose a high WHR, followed by 21.2% choosing a low WHR.

The paucity of group differences with respect to WHR for “healthy,” “attractive,” and “sexy,” suggests that weight is a more important cue for female attractiveness than is WHR.

For “most fertile,” and “least fertile,” surprisingly, there were no significant differences by ethnic group with respect to weight or WHR. For “most fertile,” with respect to weight, 51.1% of all respondents chose a heavy figure, followed by 40.4% of all respondents choosing a moderate weight figure as most fertile. Only 8.5% of the total respondents chose a light figure as most fertile. Conversely, for “least fertile,” with respect to weight, 78.5% of all respondents chose a light figure as the least fertile, followed by 16.1% choosing a heavy figure as the least fertile. With respect to WHR, 56.4% of all respondents chose a low WHR as the most fertile, followed by 25.5% of all respondents choosing a moderate WHR as the most fertile. Conversely, 53.8% of all participants chose a high WHR as least fertile, followed by 28% choosing a low WHR as least fertile.

So for the majority of participants, fertility is signaled by heavier weights and by lower WHRs. It is very likely that the visual cue to fertility lies in a woman’s hip size, since larger hips are a feature of both low WHRs and a heavier weight. Although a larger waist can also make a woman appear heavier, the results here suggest that the participants were focused on a woman’s hips, since a larger waist would make a woman appear more

tubular, and hence, less fertile.

Tassinary Figures

Results for the assignment of the descriptors attractive, sexy, and healthy to the Tassinary figures were mixed. Surprisingly, for “most attractive” and “least attractive” with respect to weight, there were no significant group differences by ethnicity with respect to weight. For “most attractive,” a moderate-weight figure was chosen by most African Americans (54.3%), followed by a light figure (32.6%). For White American participants, there was an approximately equal split between those choosing a light (42.6%) and moderate (48.1%) figure as most attractive. For “least attractive,” 70.4% of White Americans chose a heavy figure, while 56.5% of African Americans did, suggesting a slight trend in the expected direction.

There were significant differences by ethnic group with respect to weight for “most sexy” (chi-square (2)= 10.54, $p < .01$) and the results for “least sexy” approached significance (chi-square (2)= 4.82, $p = .090$). As expected, 67.3% of White American participants found a light figure to be the most sexy, as compared with 34.8% of African American participants. A greater proportion of African Americans found moderate figures to be the most sexy (54.3%) as compared with White Americans (28.8%). A slightly greater percentage of African Americans found heavy figures to be the most sexy (10.9%) as compared with White Americans (3.8%). Conversely, a greater proportion of African Americans chose light figures as the least sexy than did White Americans (32.6%

compared with 15.1%). However, the majority of participants in each subgroup still most often chose a heavy figure as the least sexy (71.7% of White American participants compared with 52.2% of African American participants) suggesting that while some African Americans may not actually seek out partners with heavier body weights, they may be more accepting of women who deviate from the White cultural norm of beauty.

For “most healthy” and “least healthy,” there were no significant ethnic group differences with respect to weight. Overall, most participants chose moderate figures as the most healthy, with lesser, but equal proportions choosing heavy and light figures. Similarly, with respect to WHR, there were no significant differences between ethnic groups, according to a Mann-Whitney test. Overall, most participants chose a moderate WHR as most healthy (46.5%) followed by a high WHR (38.4%). For the Singh figures, most participants chose a low WHR, followed by a moderate WHR as “most healthy.” This difference is likely due to the appearance of the Tassinary figures as having larger hips. By choosing a higher WHR for a figure (more tubular), the participant can visually balance a figure that appears “bottom heavy.”

Using a Mann-Whitney test, significant differences were found between ethnic groups with respect to WHR for “most attractive” ($U=977.000$, $p<.05$), but not for “least attractive,” “most sexy,” or “least sexy.” For “most attractive,” 41.3% of African American participants chose a moderate WHR as most attractive, followed by 32.6% of participants selecting a high WHR as most attractive. While a similar proportion of White American participants chose a moderate WHR (48.1%), 44.4% chose a high WHR

as most attractive. While 26.1% of African Americans chose a low WHR as most attractive, only 7.4% of White Americans did. These results support the idea that African American men prefer a lower WHR. That an even greater percentage of African American participants didn't choose a low WHR as most attractive may be attributed to way in which the Tassinary figures appear to have exaggerated hips, more so than do the Singh figures.

For "most fertile" and "least fertile," similarly to the results with the Singh figures, there were no significant differences by ethnic group with respect to weight or WHR. Overall, with respect to weight, 38.7% of the respondents chose a moderate weight as most fertile. Another 38.7% chose a heavy weight as most fertile. Conversely, 73.4% of all respondents chose a light figure as least fertile, with approximately equal proportions choosing a moderate weight figure (13.8%) and a heavy figure (12.8%) as least fertile. For WHR, 48.4% of all respondents chose a low WHR as most fertile, followed by 29% choosing a moderate WHR as most fertile. Conversely, for "least fertile," 44.7% of all respondents chose a high WHR as least fertile, followed by 36.2% choosing a moderate WHR, followed by 19.1% choosing a low WHR.

Like the results for the Singh figures, the results from the Tassinary figures suggest that fertility is signaled by heavier weights and lower WHRs.

Hypothesis 4b

Singh Figures

It was expected that all males would choose similar body weights and WHRs for adjectives such as “most and least youthful” and “most and least athletic,” because they are physical characteristics whose physical embodiment is likely to be agreed upon by most people, regardless of ethnic or cultural background. The results of this study found this to be true for some descriptors but not for others. For the Singh set, with respect to weight, there were significant group differences for “most youthful” (chi-square (2) = 6.85, $p < .05$), such that 84.6% of White Americans chose a light figure as the most youthful, followed by 11.5% choosing a moderate figure. For African Americans, 61.7% chose a light figure as most youthful, followed by 25.5% choosing a moderate weight figure. Although in both ethnic groups, the majority perceived light figures to be the most youthful, greater proportions of African Americans considered moderate and heavy figures to be youthful. Although in general, younger women are likely to be thinner, in the African American community this may not always be the case. More consistent with the expected result, there were no group differences in participants’ choices of “least youthful.” In fact 76.5% of all participants agreed that a heavy figure was the “least youthful” figure.

With respect to WHR, for the Singh figures, there was a trend toward significant differences in choice of “most youthful” by ethnic group ($U=971.500$, $p=.058$). Specifically, 51.9% of White Americans chose a high WHR, followed by 28.8% choosing

a moderate WHR. In contrast, 40.4% of African Americans chose a high WHR as most youthful, while 42.6% chose a low WHR as most youthful. Most likely, the majority of participants chose a high WHR as most youthful because of the commonly-made association between a tubular shape and a young, pre-pubescent female. It is noteworthy that an equal number of African Americans perceived a high and a low WHR as a signal of youth. Overall, for “most youthful,” there was more within-group agreement with respect to weight than WHR, suggesting that weight may be a more potent cue to youthfulness than is WHR. This may also reflect the general trend for people to gain weight as they age. There were no significant differences between ethnic groups for “least youthful” with respect to weight or WHR.

For “most athletic” there were no significant differences between ethnic groups with respect to weight. Overall, 61.2% of respondents perceived a moderate weight figure to be most athletic, followed by 28.6% of respondents choosing a light figure as most athletic. Conversely, 71.1% of all respondents perceived heavy figures to be the least athletic. With respect to WHR, for the Singh set of figures, there were significant differences by ethnic group for “most athletic,” ($U=858.500$, $p<.01$). Specifically, 58.7% of African American men perceived a low WHR figure to be the most athletic, followed by 30.4% perceiving a moderate WHR figure to be the most athletic. In contrast, 32.7% of White American men chose a low WHR figure as most athletic, while 44.2% of White American men perceived a moderate WHR figure to be the most athletic. Such results also reveal that the fewest participants in both ethnic groups chose high WHR figures as

the most athletic. That there is an inherent confound of weight with WHR, taken together with the notion that a high WHR indicates a higher body weight, suggests that weight is perhaps a more important indicator of athleticism than is WHR. No significant differences were found for “least athletic” with respect to WHR.

Tassinary Figures

It was expected that all males would choose similar body weights and WHRs for the descriptors “most youthful,” “least youthful,” “most athletic,” and “least athletic,” because they are physical characteristics whose physical embodiment is likely to be agreed upon by most people, regardless of ethnic or cultural background.

For the Tassinary set of figures, as expected for “most youthful,” there were no significant differences by ethnic group with respect to weight. Overall, 77.3% of respondents chose a light figure as most youthful, followed by 18.6% choosing a moderate weight figure as most youthful. Similarly, 69.4% chose a heavy figure as “least youthful” followed by 19.4% choosing a moderate figure as “least youthful.” With respect to WHR, there were also no significant differences by ethnic group. Overall, 50.5% of respondents chose a high WHR as the most youthful, followed by 40.2% choosing a moderate WHR. Conversely, 46.9% of all respondents chose a low WHR as the least youthful, followed by 31.6% choosing a moderate WHR as least youthful. These results are more in line with what was expected than were those found for the Singh figures.

Unlike the results for the Singh figures, for “most athletic” and “least athletic,” there were no significant differences by group with respect to weight or WHR. Overall, 38.4% of respondents endorsed a moderate weight figure as most athletic followed by a light figure (32.3%). Conversely, for “least athletic,” 75.8% of participants chose a heavy figure, followed by 17.2% choosing a light figure. For WHR, 45.5% of all participants chose a moderate WHR as most athletic, followed by 44.4% choosing a high WHR as most athletic. Conversely, 48.5% of all respondents chose a low WHR as least athletic, followed by 29.3% choosing a moderate WHR as least athletic. Only 22.2% chose a high WHR as least athletic. These results are very different from those obtained with the Singh figures where fewer participants perceived higher WHRs to be associated with athleticism. The discrepancy may be due to the high WHR Tassinary figures appearing much more athletic than the Singh figures, in part due to the pose of the figures, which is slightly more “sporty” than the pose of the Singh figures.

Other Descriptors

Although no specific hypotheses were put forth regarding the descriptors that needed to be inferred upon viewing the stimuli, there were significant group differences with respect to the assignment of the figures for some of these attributes. For example, for the Singh set, there were significant group differences in the choice of “most faithful” ($U=810.000$, $p<.05$) and “most likely to have a short-term relationship” ($U=830.500$, $p<.05$) with respect to WHR. For “most likely to have a short term relationship,” African

American men chose a low WHR figure more frequently (81%) than did White American men (61.2%). Another 26.5% of White American men chose a moderate WHR for this descriptor.

In addition, for the Tassinary figures, there was a significant difference by ethnic group, with respect to weight for “most likely to have a short-term relationship” (chi-square (2) = 5.99, $p < .05$). A greater proportion of White American participants chose a light figure for this descriptor (82.4%) than did African American participants (59.5%). Another 28.6% of African Americans chose a moderate weight figure as compared with only 11.8% of White American men.

For the Singh figures, 38.8% of White American participants chose a high WHR figure as “most faithful” compared with 27.9% of African American men. African American men were most likely to choose a low WHR figure as most faithful (48.8%) as compared with only 24.5% of White Americans who chose a low WHR for this descriptor.

For the Singh figures, there were significant group differences (chi-square (2) = 9.16, $p < .05$) for “most promiscuous,” such that 64.6% of White Americans considered a light figure to be the most promiscuous, followed by 20.8% who considered a moderate figure to be the most promiscuous. By contrast, 42.2% of African Americans considered a moderate figure to be the most promiscuous, followed by 33.3% who chose a light figure, followed by 24.4% who chose a heavy figure. Overall, there was more group consensus for “most promiscuous” amongst White American participants.

For “most likely to have a long-term relationship,” there were significant differences with respect to weight (chi-square (2) =16.574, $p=.000$) for the Singh figures. Specifically, 57.1% of African Americans chose a heavy figure, followed by 33.3% choosing a moderate figure. In contrast, 67.3% of White Americans chose a moderate figure, followed by equal numbers of participants choosing light and heavy figures (16.3% each) for most likely to have a long-term relationship. For “least likely to have a long-term relationship,” there were trends toward significant group differences with respect to weight (chi-square (2) = 5.67, $p=.059$). Here, 73.5% of White Americans chose a light figure as least likely to have a long-term relationship, followed by 18.4% choosing a heavy figure. In contrast, 52.5% of African Americans chose a light figure as least likely to have a long-term relationship. Another 25% of African Americans chose a moderate figure as least likely to have a long-term relationship, followed by 22.5% choosing a heavy figure. It is not too surprising that such a large proportion of White Americans would think light women to be least likely to have a long-term relationship. When taken together with this study’s finding that the majority of White Americans believe light women to be promiscuous, then it makes sense that women who are perceived to be promiscuous are not likely to be involved in a long-term relationship.

For the Singh figures, there were significant differences by ethnic group with respect to WHR for “most happy” ($U=735.500$, $p<.01$) and with respect to weight (chi-square (2) = 7.45, $p<.05$). For weight, 64.4% of African Americans believed a moderate weight figure to be the most happy, followed by 26.7% believing heavy figures to be the

most happy. In contrast, 48.9% of White Americans believed moderate weight figures to be the most happy, followed by 31.9% believing light figures to be the most happy. This is consistent with the notion that heavier body sizes for women is more accepted in the African American community. For WHR, 68.9% of African Americans chose a low WHR figure as “most happy,” as compared with 40.4% of White Americans.

Furthermore, higher percentages of White Americans chose moderate and high WHR figures as “most happy” (59.6% of White Americans as compared with only 31.1% of African Americans).

For the Tassinary figures, with respect to weight, “most happy,” approached significance ($\chi^2(2) = 5.74, p = .057$). Specifically, 45.8% of White Americans perceived a moderate figure to be the most happy followed by 39.6% of White Americans choosing a light figure. By contrast, 46.5% of African Americans perceived a moderate figure to be the most happy, followed by 32.6% choosing a heavy figure. This result parallels both the results obtained with the Singh figures and the greater acceptance of heavier body sizes purported to exist in the African American community. With respect to WHR, for the Tassinary figures, there were no significant differences by ethnic group, but overall, respondents felt that perceived figures with a high WHR (tubular) to be most happy (45.1%), followed by figures with a moderate WHR (33%). This result reflects the perception by men that women with larger hips are not as happy as those with smaller hips. This perception has a basis in previous research, as suggested by the results of the Davis, Durnin, Dionne, & Gurevich (1994) study, which found that hip diameter was a

better predictor of shape dissatisfaction than overall weight. The ethnic differences that emerged from the Singh figures suggest that for African Americans, a large hip size is perhaps a less potent source of body dissatisfaction than is the case for White Americans. However, the same ethnic differences were not found with the Tassinary figures (i.e. African American men did not endorse Tassinary figures with lower WHRs to be most happy). This could be due to the slightly exaggerated hips that many viewers perceived the Tassinary figures to have, leading even African American participants to moderate their choice of figures with low WHRs.

Overall for the Singh set of figures, there were not many significant ethnic group differences with respect to WHR for the majority of the descriptors. With respect to weight, the significant ethnic group differences that emerged were consistent with what was expected. Overall for the Tassinary set of figures, there were not many significant ethnic group differences with respect to weight or WHR for the majority of the descriptors.

Hypothesis 5a

As expected, men who endorsed more androgynous sex roles, did choose significantly different figures than the rest of the sample. For overall ideal Singh figure there were significant differences ($U=487.50$, $p<.001$). Follow-up t-tests for proportions found significant differences between groups for low WHR ($t(102) = 2.49$, $p<.016$). Specifically, 82.61% of androgynous males chose a low WHR as ideal compared with

53.75% of men in the other three categories of sex role identity.

For the Tassinary figures, there were no significant differences in WHR preferences between those who endorsed androgynous sex roles and everyone else. Interestingly, amongst the 23 androgynous participants, seventeen were African American, fourteen of whom disliked a high WHR. Half of the six White American androgynous participants disliked a high WHR. These results suggest that androgyny did not moderate preferences for a low WHR because most androgynous participants chose a low WHR as ideal to begin with.

Hypothesis 5b

In accordance with previous research, there were significant sex role differences between White and African American participants, as measured by the Bem Sex Role Inventory. Based upon each participant's score, he was assigned to one of four sex role categories: masculine, feminine, androgynous, or undifferentiated. An overall chi-square found significant differences ($\chi^2(3) = 8.62, p < .05$). A follow-up t-test for proportions found there to be significant differences specifically between ethnic groups for androgyny, such that 34.7% of African Americans were classified as androgynous, while only 11.1% of White Americans were.

Other notable findings

BMI of Participants and their Partners

Overall, the majority of participants who responded to the inquiry of their most recent partner's height and weight, reported that their partner's BMI fell into the normal category (58.3%). The next most common BMI category for participants' partners was the underweight category (26.4% of participants reported that their partner's BMI was under 19). Only 15.3% of participants reported having partners who fell into the overweight or obese categories.

The BMI scores of participants did not significantly influence their expressed preferences for weight nor for WHR, for both sets of figures. However, both race and college status had significant influences on the BMI's of participants' partners. Using ANOVA, race significantly influenced partner's BMI, $F = 5.20$, $p < .05$, as did college status, $F = 12.77$, $p < .01$. As expected, African American participants' partners had a higher BMI (22.89, $SD = 5.04$) than did White American participants' partners (20.81, $SD = 2.55$). Furthermore, community males' partners had a higher BMI (23.73, $SD = 5.21$) than did college males' partners (20.53, $SD = 2.33$).

Also of interest was whether the expressed preferences for weight were consistent with the BMI scores of participants' partners. For example, did participants with normal weight partners also select as ideal figures in the normal weight category? To this end, a chi-square analysis was performed. There were significant differences between the expressed least favorite weight for the Tassinary figures and partner's BMI category (chi-

square (6)= 15.36, $p < .05$). In other words, there were differences in the selection of least favorite weight, in accordance with the BMI category of the participants' partners. Specifically, those participants with underweight partners overwhelmingly disliked overweight Tassinary figures (89.5%). Those with normal weight partners disliked overweight figures the most (64.3%), followed by underweight figures (23.8%). For participants with overweight and obese partners, most disliked underweight figures (66.7%). Interestingly, both of the participants with obese partners selected an overweight figure as their least favorite Tassinary figure.

There were no significant differences for Tassinary ideal weight, nor for Singh ideal and least favorite weight, although the analysis for Singh ideal weight, approached significance. Here, participants with partners whose BMI was either underweight or normal weight, selected as ideal Singh figures in the underweight and normal weight categories. Participants with partners whose BMI fell into the overweight or obese categories tended to select as ideal Singh figures in the moderate and heavy weight categories. Notably, for the Singh figures, of the 19 respondents with underweight partners, 12 chose a moderate or heavy figure as ideal, 7 of whom were African American. For the Tassinary figures, for the 19 respondents with underweight partners, 14 chose a moderate or heavy figure as ideal, 8 of whom were African American.

Favorite Body Part

There were significant differences in the responses given by participants to the

open-ended question, “What is your favorite body part on a female?” Specifically, there were significant differences by race (chi-square (7) = 17.13, $p < .05$) and by sex role identity (chi-square (21) = 35.04, $p < .05$).

African American men most frequently chose hips/buttocks as their favorite body part (28.6%) as compared with only 17.6% of White American men. The second most commonly chosen favorite body part by African American men was legs (22.4%). For White American men, the top three most frequently chosen favorite body parts were face/hair (27.8%), breasts (24.1%), and legs (16.7%).

CHAPTER FOUR

DISCUSSION

The results of this study are consistent with previous research demonstrating that African American males are more accepting of larger body sizes for women. Specifically, for both sets of figures⁴, African Americans disliked a low body weight for women more frequently than did their White American counterparts. For the Singh figures, African American men chose a heavy body size as ideal. For the Tassinary figures, there were no differences between groups in the selection of an ideal figure. This could be due to African American men liking both moderate and heavy figures, yet strongly disliking a woman who appears to be underweight. This suggests that African American men are more flexible in what they choose as an ideal body size for women, yet less flexible (more group consensus) on what they deem least attractive. Such results support the idea that African American men's attitude toward women's body sizes may serve as a factor that protects women from developing negative attitudes

4

For the most, the stimulus set did not make much of a difference in the results for participants' preferences for weight and WHR. In the few cases for which it did, the most likely explanation is the appearance of the Tassinary figures as having larger hips as compared with the Singh figures within the same body weight category. Because the hips on all the Tassinary figures appeared slightly exaggerated, a viewer might move to the next lower body weight category or to a higher WHR, in order to "balance" the figures to achieve his personal preference. The Tassinary set of figures was used in the present study, mainly for replication purposes, while the Singh set of figures was modified and used in order to better elucidate the WHR preferences of African American men.

toward their bodies and concomitant eating pathology. In fact, the idea that African American *dislike* women with low body weight could send an even more powerful message to women than the idea that they idealize a woman with a moderate to heavy body weight. This supports the idea that African American males' preferences function as a cultural variant that may serve to protect African American women from eating pathology. This may occur either through influencing women's self-perception, or through the process of disidentification from White, mainstream values.

Singh's (1994a) findings that African Americans do not differ significantly from White Americans in terms of preferred body weight for women was not supported. The results of this study are more aligned with other research indicating that African American men are more accepting of heavier body sizes for women. Here, examining the results of participants' ideal figures, it may seem that the differences between groups are not large enough to refute Singh's findings. However, asking participants to also select a least favorite figure revealed more subtle differences between group that were not assessed through Singh's research design. Indeed, assessing what men do not like is an important adjunct to assessing what they do like, and should be considered in future research. Corroborating that African Americans do prefer heavier body sizes for women are findings from this study that there are significant ethnic differences in the BMI scores of participants' partners. However, the mean BMI of African American participants' most recent partner is still quite low, at approximately 23. A BMI score of 23 lies in the middle of the normal body weight category. This, taken together with the low BMI score

of their White American counterparts' partners' BMI scores, may suggest that men do not accurately perceive the weights of their partners and are underestimating their actual weights. Another possibility is that participants chose figures with a higher ideal weight during the study, but do not actually prefer such figures. This is unlikely, however, because the figures' weight were all skewed toward being lower than what is realistic for women, in general.

Contrary to what was expected within ethnic groups, participants from the community did not choose a heavier ideal figure than their college counterparts. This may be due either to sampling error, in which the composition of participants within each subgroup were more diverse than anticipated or all participants exhibited similar levels of acculturation. Furthermore, when age was examined as a covariate, there were no significant differences between college and community participants with regard to weight and WHR preferences. Another possible reason for the lack of differences could be the way in which the questions were posed to participants. The questionnaire asked the participants to choose an ideal figure, not a realistic partner. It was thought that men from the community subsample would be more inclined to choose heavier women as ideal due to the higher prevalence of overweight in the community than on college campuses. Perhaps for these men, a heavy woman is a more realistic choice of partner, but not necessarily their ideal. In support of this notion is evidence from this study that the BMI scores of community males' partners was significantly higher than that of college males' partners.

Another expected difference between college and community subsamples was level of acculturation for African Americans. Any differences found were expected to play a role in expressed preferences for ideal female figure. Specifically, more acculturated African Americans were expected to have preferences most similar to those of White American men. No significant differences were found, perhaps due to either a more diverse sample within both the college and the community groups, or to a more homogenous sample among all African Americans, with a restricted range of scores on the acculturation measure. Despite these possibilities, the data from the study which cross-validated the short version of the AAAS with the original form found that young college students samples and older community samples obtained similar scores on the AAAS (Landrine & Klonoff, 1995). Therefore, the results of this study finding no differences between college and community samples may not be unusual. When examining the high vs. the low scorers on the AAAS, the only significant difference to emerge with regard to body weight preferences, was the difference between the most and least acculturated with regard to the Tassinary least favorite figure. Here, more traditional (less acculturated) African Americans were more likely than the most acculturated African Americans to reject the low body weight figures. This suggests that there may be some variation in expressed preferences for female body weight for those who have different degrees of adherence to traditional African American values and beliefs. A broader range of acculturation scores might result in stronger differences in weight preference between African American subgroups.

In further support of the lack of diversity within the African American sample, there were no significant differences in scores on the RIAS-B between African American college and community participants. Overall for this measure, all but two participants scored highest on the Internalization stage which could reflect a sample that is very racially identified, or could reflect social desirability, due to the sensitive nature of some of the questions on the RIAS-B.

Previous research has yet to examine ethnic differences in men's choice of ideal and least favorite WHR, a cue which has been deemed important in mate selection. When asked to select an overall ideal figure, there were significant group differences in ideal and least favorite WHR for both the Singh and Tassinary figures. Consistent with notions from popular culture, African American men were more likely than White American men to choose a low WHR as ideal and a high WHR as least favorite. Similar results were found for the light body weight category for both sets of figures: African American men were more likely to choose a low WHR as ideal.

For the moderate weight category, the hypothesis was not supported for the Singh nor for the Tassinary figures. Here, there were no group differences with regard to ideal and least favorite WHR. For the Singh figures, all participants selected a low WHR most frequently as ideal, followed by a moderate WHR. For the moderate weight Tassinary figures, a moderate WHR was selected as both ideal and least favorite by participants overall.

One possible reason for this seemingly contradictory results could be that

participants had difficulty distinguishing differences in the WHRs of the Tassinary figures. For this set, it is possible that participants focused in on a specific figure as ideal. Then, when asked to select a least favorite, they decided that a particular figure that appeared to have a similar shape, was not ideal, leading them to reject that figure. Misjudging differences in WHR would be more likely to happen for the Tassinary figures whose WHRs overlapped within body weight category, than for the Singh figures, whose WHRs are independent within each body weight category. In the case of least favorite moderate figure, for the Tassinary set, it is possible that men perceived these figures to be not salient, in terms of weight, as compared with a figure that is either light or heavy. Therefore, in order to find a woman of moderate weight attractive, that woman would need to have a very specific, definite shape, one of either extreme curves, or no curves whatsoever, leading them to reject the moderate WHR as ideal. This explanation does not, however, satisfy the question of why a participant who selected a least favorite figure for this reason, would also choose a similarly shaped figure as ideal.

A perhaps more compelling reason for these results (a moderate WHR most frequently selected as ideal and most frequently selected as least favorite) could be the way in which the Tassinary figures' WHRs were constructed and depicted. The waist and hip circumferences were varied separately such that multiple combinations of waist and hip sizes could result in the same actual ratio. Also, these multiple combinations were simultaneously available to the participants for selection as ideal and least favorite. Thus, the majority of participants may have selected a specific waist/hip combination as ideal.

Then, a different combination of that resulted in the same ratio was selected as least favorite. Looking at the specific figures chosen by participants, 29% of the total sample chose the figure with .70 as ideal with small hips and a small waist. Another 28% of the total sample chose as ideal the moderate figure with a .80 WHR made up of small hips and a moderate waist. Looking at the overall most frequently chosen least favorite moderate figure, 61% of all participants endorsed the figure with a .70 WHR comprised of large hips and a large waist as their least favorite. So, the same WHR of .70 was endorsed as unattractive when comprised of large hips, but when comprised of small hips, it was selected as ideal. This may suggest the importance of apparent BMI in the selection of ideal and least favorite WHR, since the apparent BMI increases with an increase in hip size. Furthermore, it suggests a flaw in the construction of the Tassinary set of figures and the superiority of varying only the waist or the hips, but not both for the purpose of creating a stimulus set of figures.

For the assignment of adjectives and descriptors to the figures, there was not much agreement on the descriptors that needed to be inferred, such as kind, good listener, and trustworthy. For the assignment of figures to “most attractive” and “most sexy,” the preferences of the participants, for the most part, mirrored earlier findings that African American men are more accepting of heavier body sizes for women and prefer a lower WHR than their White American counterparts. The paucity of group differences with respect to WHR for “healthy,” “attractive,” and “sexy,” suggests that weight is a more important cue for female attractiveness than is WHR.

There was a moderate level of agreement for other physical attributes such as “most athletic,” and “most youthful.” For “most athletic,” weight seemed to be a more important indicator than was WHR. For “most youthful,” the majority of respondents in both groups chose a light weight figure, but greater proportions of African American participants than White American participants endorsed moderate and heavy figures as “most youthful,” suggesting that in the African American community, heavier weights may be associated with youth with greater frequency than in the White community. For “most fertile,” for the Singh figures, there were no significant ethnic group differences for weight or WHR: About half of all participants chose a heavy figure as “most fertile,” followed by about 40% choosing a moderate figure. For WHR, about half of all participants chose a low WHR, followed by 29% choosing a moderate WHR as “most fertile.” For the Tassinary figures, there were no significant ethnic group differences, either. Here, about 40% of participants chose a moderate weight as “most fertile,” and another 40% chose a heavy weight as most fertile. About half of all respondents chose a moderate WHR as most fertile. These results suggest that there was a high degree of agreement among most participants that fertility is signaled by a low to moderate WHR and a moderate to heavy body weight. These results also support Singh’s idea that a low WHR is a signal of reproductive health and fertility. It appears, then, despite a moderate to heavy body weight, many White American participants still chose a light body weight as the most attractive, perhaps reflecting a lack of current concern with procreation.

Interestingly, for descriptors such as “most likely to have a long-term

relationship,” “most likely to have a short term relationship,” and “most promiscuous,” the findings fit together in a way that makes sense: African Americans were more likely to choose a moderate to heavy figure for most likely to have a long term relationship while White Americans chose a moderate figure. For both groups, a majority of participants chose light figures as least likely to have a longterm relationship, although a moderate number of African American men chose a moderate figure. This fits well with the finding that White American men perceived light figures to be the most promiscuous, while African American men perceived moderate figures to be the most promiscuous. A promiscuous woman is unlikely to be involved in a longterm relationship. White American men were more likely to choose a high WHR figure as “most faithful” while African American men were more likely to choose a low WHR as most faithful.

African American males were expected to be more androgynous than White American males, in accordance with previous research. Although there were no significant differences between ethnic groups in terms of gender role identity, there was a trend toward such differences, in which African American males from the community most frequently endorsed an androgynous sex role, while White college males most frequently endorsed a masculine sex role. White community males, interestingly, most often endorsed a feminine sex role. This finding is likely due to the methods of recruitment and a self-selection bias, in which White American males who play nontraditional sex roles may have been more likely to respond to an advertisement to participate in a research study. In addition, it was expected that androgynous men would

be more likely to choose as ideal women with a higher WHR. This was not the case with the Singh figures. In fact, higher percentages of androgynous men chose a low WHR as ideal. For the Tassinary figures, higher percentages of androgynous men chose a moderate WHR as ideal (.70-.80). This was likely due to the appearance of the Tassinary figures as heavier than they actually are due to the variation of hip size separate from waist size. The appearance of a figure with a higher apparent BMI may have led participants to moderate their choice of ideal WHR. For the Tassinary figures, choosing a figure with smaller hips would accomplish this, as would choosing a figure with a smaller waist.

The results of participants' answers to the open-ended question, "What is your favorite body part on a female?" were somewhat surprising. There were significant differences in the responses given by participants to this question by race and by sex role identity. African American men most frequently chose hips/buttocks as their favorite body part (28.6%) as compared with only 17.6% of White American men. Although the difference between ethnic groups was to be expected, it was expected that a higher number of African American men would endorse this feature as their favorite body part. The second most commonly chosen favorite body part by African American men was legs. For White American men, the top three most frequently chosen favorite body parts were face/hair, breasts, and legs. Surprisingly, only 16.5% of men overall chose hips/buttocks as their favorite body part on a woman. This does not necessarily undermine Singh's thesis that waist-to-hip ratio is an important cue in mate selection. It

is probably not the primary cue that men use to select an attractive mate. Furthermore, it may be an unconscious cue that comes into play after appraising a woman's overall body size and facial features.

Although the findings from this study add a layer of complexity to what is already known about men's preferences for female weight and WHR, there are some important limitations to be addressed in future research. First, the appearance of the figures was not ideal. The drawings were done in black outline on a white background, possibly giving the impression that they represented White women. Furthermore, the style of hair appeared more consistent with that of White women than any other ethnic group. If the figures were interpreted as White women by all participants, then the preferences for weight and WHR found by the present study would only apply to White American and African American men's preferences for White American women. Any differences according to ethnic group could be attributed to the application of different standards of beauty for women of different ethnic backgrounds. Therefore, preferences for weight and WHR could still be considered a cultural variant, but questions would remain as to what type of figure White American men prefer for African American women, as well as, what type of figure African American men prefer for African American women. Finding that White American men and African American men had similar preferences for White American women could mean one of two things: 1) African American men apply the same standards of beauty (thin, less curvaceous) to White American women as do White American men, thereby adopting the cultural values of the dominant culture for the

specific task of judging the attractiveness of White American women, or, 2) African American men reserve their flexibility in judgment for African American women, in part, due to the process of disidentification from mainstream, White American culture. Here, African American men might reject thin ideals of beauty for African American women, but apply those ideals to White American women because White American women are seen as members of the White majority, for whom such ideals may be viewed as attainable.

A related limitation of the study was that participants' dating preferences were not assessed. For example, it was unclear if any one participant preferred to date women of a specific ethnic group. Knowing whether men hold White and African American women to different standards of beauty would lend further support to the idea that African Americans engage in a process of disidentification from White, mainstream values, in order to maintain a positive self-image. It can be speculated that perhaps men do hold women of different ethnic groups to different standards of beauty. Asking participants about the ethnic background of women they date and about the perceived ethnicity of the figures they viewed in this study would have shed additional light on actual preferences of men and how choosing a figure from a posterboard may or may not translate to real life choices of partners.

The figures were further limited by representations of light, moderate, and heavy weight categories for women. Although the Tassinary figures are intended to represent a woman that is five feet, four inches tall, it is unclear as to what weights the figures

represent. The Singh figures, on the other hand, represent a woman that is five feet, five inches tall. The light weight category corresponds with a women who is 90 pounds, a BMI of 15.4. The moderate weight depicts a women of 120 pounds, a BMI of 20.6 and the heavy weight category depicts a woman of 150 pounds, a BMI of 25.7. Such BMI's do not realistically correspond with the actual weights of women in the United States. According to the Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report (1998), the NHANES III study from 1988-1994 found that 49.2% of White American women are either overweight or obese, as are 65.8% of African American women. The current range of BMI values for a normal weight individual is 19-24. An underweight figure with a BMI of 15.4 is severely underweight and not typical of even most underweight women that men would consider to be potential partners. That many participants, particularly White American males, chose these figures as most attractive, indicates either a misperception on their part of the differences between figures, or a genuine liking for figures below a healthy, normal body weight. In light of the prevalence of media displays of underweight women, the latter explanation is a likely one. Some participants did, in fact, have partners whose BMI scores fell into the underweight category. The result that most participants with underweight partners tended to choose a moderate or heavy ideal body weight suggests more generally that men may not necessarily date women that represent their preferred body type, perhaps due to other valued characteristics, such as facial features or personality.

For the heavy Singh figures, a BMI of 25.7 falls in the low end of the overweight category (range = 25-29). Although the difference between the weight categories was salient to participants, the figures, as constructed, did not accurately reflect a typical woman in each category in the United States population. Future studies should adjust the weights of the figures and add a category to reflect an obese weight category (BMI range 30-39). Furthermore, height of the figures should be varied such that the various BMI categories are represented by various levels of height, in addition to weight. Taller women would appear thinner despite having the same BMI of a shorter woman. A woman of 5 feet 4 inches may not be universally appealing or may be appealing to one ethnic group more so than another. In addition, a very tall woman may represent a participant's "ideal" figure, but not constitute a realistic partner for that individual. Further research should make such considerations.

Another flaw related to using two-dimensional line drawings to assess preferences for WHR is that such drawings do not capture the true three-dimensional nature of women's bodies. Hip size can be assessed by looking at a woman from the front, side, or back. Different viewing angles was not possible in this study. Future studies could make use of new software available, such as Poser, in order to allow participants to view figures from all angles before selecting an ideal figure. Even better is a computer program that would allow the participant to construct his or her ideal figure without any pre-existing stimuli.

A limitation of the Tassinary figures is the way in which the WHR's overlapped

within body weight category. The levels of waist-to-hip ratio ranged from .50 to .90. Waist and hip circumference were varied separately so that some figures within a body weight category had the same WHR, comprised of different combinations of waist and hip circumference. For example, a .70 can be achieved by having a small waist with small hips, by having a medium waist and medium hips, or by having a large waist and large hips. All, however, would result in the same ratio of waist to hip circumference. This was a problem because when participants chose a figure as both ideal and least favorite, it was not known whether they were selecting different combinations of waist and hip size, or the same combination as both ideal and least favorite. It was also difficult to make direct comparisons between the Singh and Tassinary figures, in terms of expressed preferences for WHR within body weight category. This was due to the fact that the range of WHRs for the Singh figures was larger than that of the Tassinary figures. Furthermore, the way in which the levels of WHRs were classified for the purpose of statistical analysis was not consistent across sets of stimuli. Instead, the levels of WHRs were classified in a way that made sense for each set of figures, in accordance with the range of WHRs for each set.

A major limitation of both sets of figures centers around the fact that apparent weight is confounded with WHR. In other words, expanding the size of a woman's hips, gives the appearance of larger thighs in a two-dimensional drawing. This makes it more difficult to assert which cue to mate selection is more primary, weight or WHR. For example, if a man chooses a WHR of .60 as more attractive than a WHR of .80, it is

unclear if the actual shape of the woman is the impetus for his choice, or whether his choice is based on the fact that the figure with the .60 has smaller thighs and appears to weight less overall.

Another limitation of the study concerns the sample size and composition. There were fewer men in the White community subgroup than in the other subgroups. The recruitment strategies were such that may have led to a bias in the characteristics of those who did respond to the advertisements for the study. For example, it was revealed that the men in the White community subsample were more likely to endorse a feminine sex role than were the men in other groups. Such a finding suggests that this subsample may not be representative of White males from the Washington, DC community. In addition, the study's results for African Americans may not be necessarily be applicable to all African Americans, especially those represented in the lower socioeconomic levels. The African American sample in the current study was on average, of middle class and not significantly different from the White Americans participating in this study. As of the 2001 census, 20.7% of Blacks were below the poverty line (Proctor & Dalaker, 2002). A more socioeconomically diverse sample would lend itself to a more diverse array of acculturation levels, in future research. Furthermore, according to the NHANES III study, for all racial and ethnic groups combined, women of lower socioeconomic status (income < 130 percent of poverty threshold) are approximately 50% more likely to be obese than those of higher socioeconomic levels. This suggests that the pool of women encountered by men of lower socioeconomic levels are more likely to be obese, which

may then influence their preferences for female body size and shape. This study did not capture this segment of the community well, as evidenced by only one African American participant falling into the lowest SES category.

A final limitation of the study concerns the gender and ethnicity of the experimenter. A White American female may have led participants to answer questions in a more socially desirable way than otherwise might happen, had the experimenter appeared differently. Although there was the potential for biased responding due to the appearance of the experimenter, this was unlikely because the experimenter removed herself from view during the completion of the task.

Despite these limitations, it appears that African American men are more willing to idealize a woman of a heavier body size with more curves than their White American counterparts. Furthermore, they have a more flexible concept of the types of body sizes and shapes are attractive for women, whereas White American men show more consensus that the type of woman that they find most attractive is thin or average in weight, with a more tubular shape. Such differences play an important role in the differential messages that get communicated to women about the kinds of bodies that men like. Because the media is controlled by the White, mainstream, it makes sense that the images of women projected to the public mirrors that which is pleasing to White males. African American women have been noted to have a more positive body image than their White American counterparts (Rucker and Cash, 1992; Abrams, Allen, and Gray, 1993; Harris (1994); Parker et al., 1995). Evidence from this study furthers the support for the idea that what

African American men's preferences for female body size and shape serve to buffer African American women from having the kinds of eating pathology (anorexia nervosa, bulimia nervosa) in which White women are over-represented. Weight control initiatives, however, should keep in mind that cultural variants, such as preferences for weight and WHR, may also be a factor that serves to maintain unhealthy attitudes and practices that contribute to the higher rates of overweight and obesity in African American women. The notion that heavier body sizes for women are acceptable may protect women who are prone to restrictive eating and related disorders, such as anorexia nervosa. Alternately, understanding that men are accepting of heavier body sizes can contribute to overweight and obese women feeling like there are few incentives to lose weight. A possible solution to this dilemma lies in educating African American men about the health risks associated with overweight and obesity, as well as the impact of the messages they send to women about their preferences for body shape and size.

The additional finding that African American men, on the whole, prefer a WHR that is lower than that of White American men undermines the idea that a WHR of .70 is universally appealing. WHR most likely serves as an additional source of information about a woman's health, after overall weight cues and facial cues have been evaluated. Furthermore, the present study suggests that the importance of this cue varies by cultural group.

It would be reasonable to expect that African American men's preferences for body shape and size could change over time, in accordance with cultural norms and

values, or in reaction to the current cultural norms of the White American mainstream. Since African American women of higher socioeconomic levels are more affected by the types of eating pathology that affect White American women, it will be important to continually assess African American men's preferences for various body shapes and sizes by both socioeconomic status and acculturation level. Furthermore, media depictions of African American women should be assessed. The impact of the size and shape of women in television and film on women's self-image and men's perception of what is attractive or acceptable cannot be underestimated. Presumably, the accuracy of depictions of women by the media and their representativeness of real women influence the types of attitudes women and men hold towards overweight and obesity, and therefore, have important health implications.

Future research could further the findings of this study by addressing the major limitations of this study. First, the figures should be improved upon to look three-dimensional and realistic. Next, the size and composition of the sample would strengthen the idea of WHR as a cultural variant, should preferences for this cue also vary for other ethnic groups. Finally, the differential standards of beauty that might be applied by men to women of different ethnic backgrounds should be addressed, perhaps by constructing figures that appear to be of various ethnic backgrounds. In addition, the preferences of men of different ethnic backgrounds should be assessed, while varying the ethnicity of the figures presented. As long as White American mainstream culture controls the media and subsequently, how women are depicted, research on all ethnic groups will be required

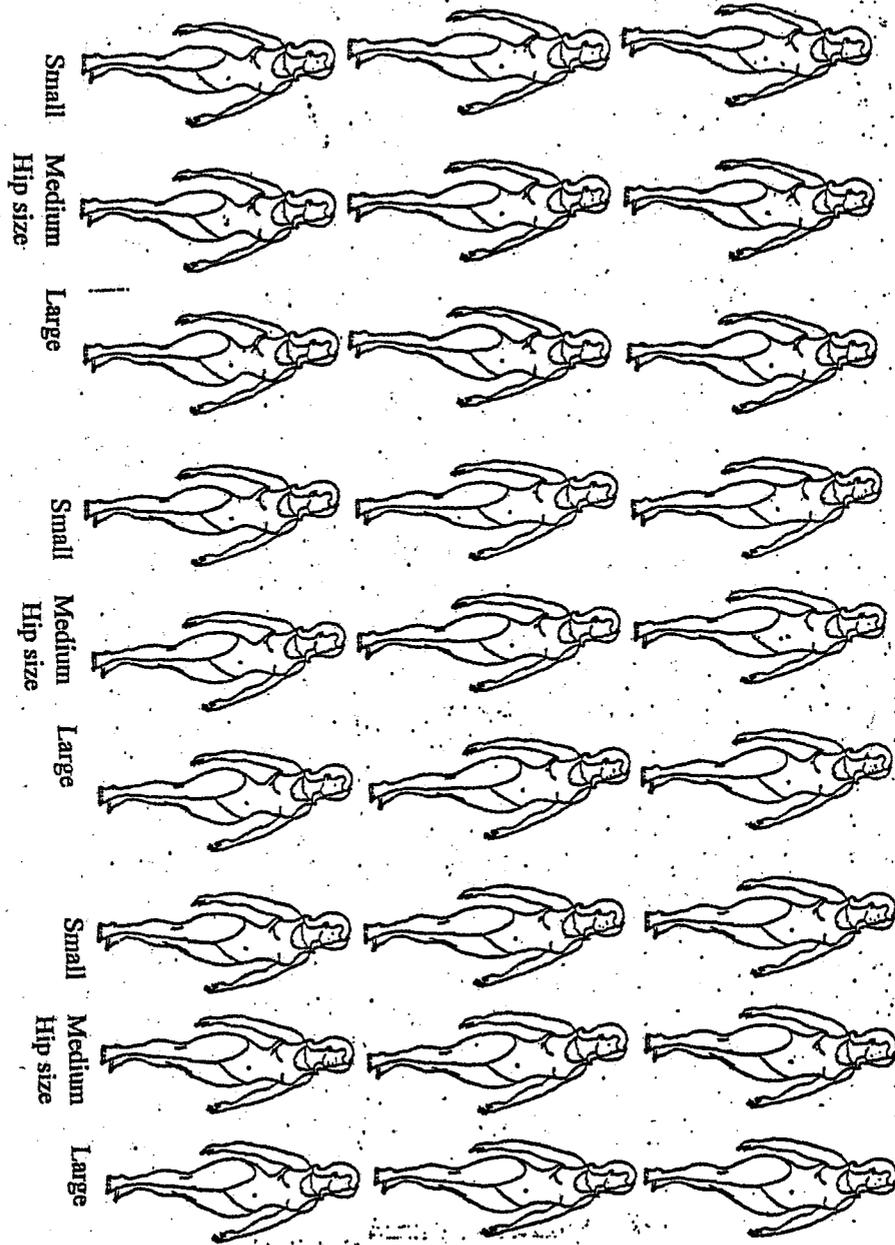
in order to gauge the influence of such depictions on the perceptions of women's bodies by both women and men.

APPENDIX A

1. Age: _____
2. Ethnicity (circle one): Caucasian African American Other
3. Marital Status (circle one): Single Married Separated Divorced
4. Are you currently enrolled in college? (circle one): Yes No
5. Current occupation: _____ Highest Grade Level: _____
6. For mother or primary female guardian,
 - a. Circle highest level of education Grade 7 or lower
Grade 8 or 9
Grade 10 or 11
High School Graduate
Part of College
College Graduate
Graduate Degree
 - b. Circle mother's current marital status (check all that apply):
 Married Remarried Divorced Never Married
 Single Widowed Separated
 - c. Number of children (this includes step-children and adopted children): _____
 - d. Current occupation _____
 - e. Number of years in work force full-time during your lifetime: _____
7. For father or primary male guardian,
 - a. Circle highest level of education Grade 7 or lower
Grade 8 or 9
Grade 10 or 11
High School Graduate
Part of College
College Graduate
Graduate Degree
 - b. Circle father's current marital status (check all that apply):
 Married Remarried Divorced Never Married
 Single Widowed Separated
 - c. Number of children (this includes step-children and adopted children): _____
 - d. Current occupation _____
 - e. Number of years in work force full-time during your lifetime: _____
8. What is your current or most recent spouse/partner's height and weight? _____
9. What is your sexual orientation? Circle one: Heterosexual Homosexual Bisexual

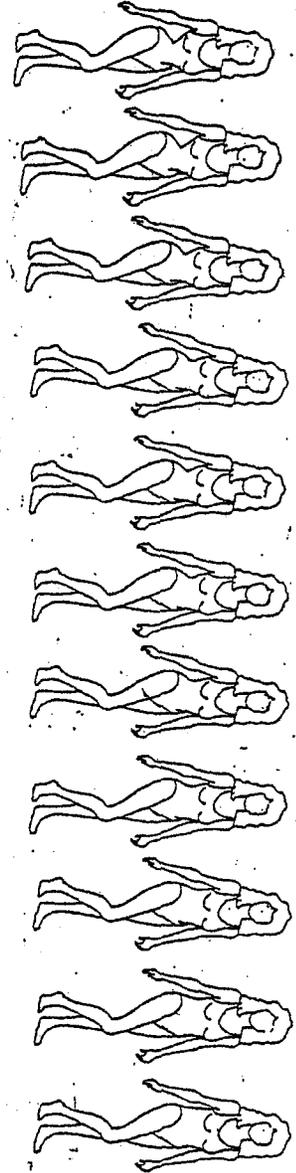
APPENDIX B

Tassinary & Hansen Figures

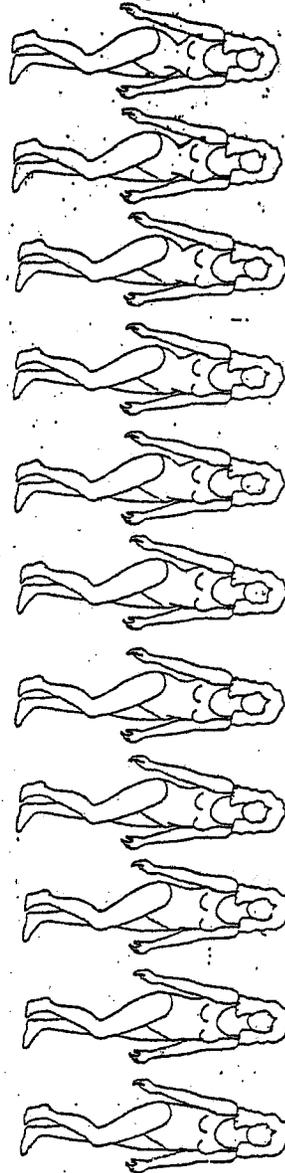


Singh Figures

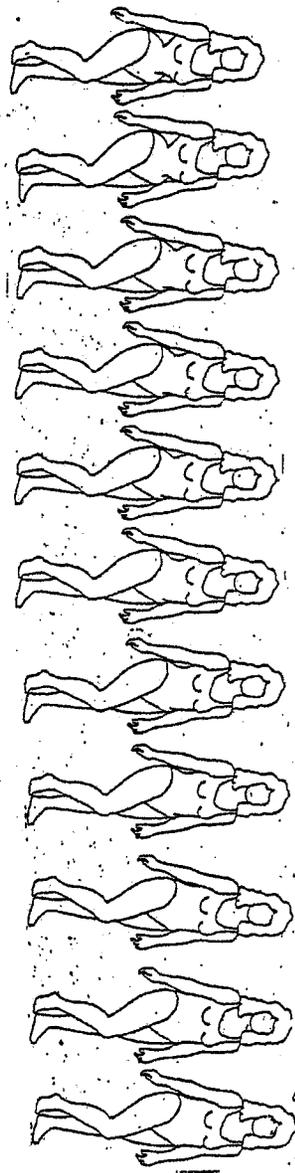
Light



Moderate



Heavy



APPENDIX C

Explanation of Study:

Many people believe that people with particular bodily features (e.g. red hair, beady eyes, etc). behave in certain ways or exhibit specific behavioral characteristics. Recent research shows that some behavior styles and belief systems (personality) are indeed affected by a person's shape and body build. Furthermore, and more intriguing, research shows that people can make amazingly accurate judgments about a person's personality by merely observing their full body photographs. The research in which you will be participating is intended to replicate and confirm research findings about body shape and personality. We are interested in finding out whether mere line drawings, as opposed to photographs, can be used to judge a person's personality. Please take time to carefully observe each outline of the body shape. You will be asked to compare and rank these various shapes for some physical and psychological characteristics.

Looking at these 33 figures,

1. Which figure represents your ideal female? _____
2. Which figure represents your least favorite female? _____

Looking at the next 11 figures,

1. Which figure represents your ideal female? _____
2. Which figure represents your least favorite female? _____

Looking at the next 11 figures,

1. Which figure represents your ideal female? _____
2. Which figure represents your least favorite female? _____

Looking at these 27 figures,

1. Which figure represents your ideal female? _____
2. Which figure represents your least favorite female? _____

Looking at the next 9 figures,

1. Which figure represents your ideal female? _____
2. Which figure represents your least favorite female? _____

Looking at the next 9 figures,

1. Which figure represents your ideal female? _____
 2. Which figure represents your least favorite female? _____
-

The following is a list of adjectives. For each of them please assign a figure that represents the woman whom is most and least like that feature.

Most Like:**Least Like:**

Attractive _____

Attractive _____

Youthful _____

Youthful _____

Sexy _____

Sexy _____

Happy _____

Happy _____

Trustworthy _____

Trustworthy _____

Healthy _____

Healthy _____

Faithful _____

Faithful _____

Kind _____

Kind _____

Fertile _____

Fertile _____

Good Listener _____

Good Listener _____

Promiscuous _____

Promiscuous _____

High Career
Potential _____High Career
Potential _____

Nurturing _____

Nurturing _____

Assertive _____

Assertive _____

Short-term
Relationship _____Short-term
Relationship _____Long-term
Relationship _____Long-term
Relationship _____

Athletic _____

Athletic _____

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