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Universal Black Female Beauty: An Examination of Waist-to-Hip Ratios over Forty-three Years

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ABSTRACT

The present research examined the waist-to-hip ratios (WHRs) of 649 Black women who were JET "Beauties of the Week" from 1965 to 2007. It was hypothesized that mean WHR would meet the universal WHR criterion of .70 or less, indicating attractive, healthy, and fecund women. Consistent with the hypothesis, the mean WHR was .67. Additionally, there was a small positive linear trend in WHRs over time. The results for this sample of women selected by JET editors for their beauty suggest that the attractive body shape for Black women is based on a universal and biologically significant body fat ratio.

KEYWORDS

Beauty, Black Women, Waist-to-Hip Ratio, Body Shape

Attractiveness is a major focus of social perceivers. It is the first attribute we attend to when we see someone, and we can assess it in .15 seconds or less (Etcoff, 1999; Zajonc, 1998). It also has a major impact on individuals' lives. For example, attractive people live longer (Henderson & Anglin, 2003). Additionally, attractive people are perceived as healthier and actually are healthier (Gupta, Etcoff, & Jaeger, 2016; Shackelford & Larsen, 1999; Grammer & Thornhill, 1994; Rhodes, 2006; Thornhill & Gangestad, 1999), are more likely to win elections (Banducci, Karp, Thrasher, & Rallings, 2008; Berggren, Jordahl, & Poutvaara, 2010; Budesheim & DePaola, 1994; Rosenberg, Bohan, McCafferty, & Harris, 1986), are more likely to be hired (Dipboye, Arvey, & Terpstra, 1977), are paid more (Hamermesh & Biddle, 1994, Roszell, Kennedy, & Grabb, 1989), are less likely to be found guilty of a crime (Mazella & Feingold, 1994), and are less likely to receive harsh sentences if found guilty (Desantts, & Kayson, 1997). In addition attractive

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men have higher quality sperm than unattractive men (Soler, Kekäläinen, Núñez, Sancho, Álvarez, Núñez, et al.,, 2014; Soler, Núñez, Gutierrez, Núñez, Medina, et al. 2003), and attractive women are more fertile than unattractive women (Apicella, Feinberg, & Marlowe, 2007; Buggio, Vercellini, Somigliana, Viganò, Frattaruolo, & Fedele, 2012; Hill & Hurtando, 1996; Jasienska, Lipson, Ellison, Thune, & Ziomkiewicz, 2006; Jokela, 2009; Smith, et al., 2006). Attractiveness is most important for evaluations of women (Buggio, et al., 2012; Buss, 1989, 2006; Buss & Schmitt, 1993; Wade, 2000, 2003) because it indexes fertility. But, what are the correlates of a woman's attractiveness?

Since women's attractiveness indexes health, fecundity, and successful mothering potential (the ability to most successfully raise offspring independent of the ability to become pregnant), femininity, and pathogen resistance (Buss & Schmitt, 1993; Cunningham, 1986; Cunningham, *et al*., 1990, 1995; Henss, 1992, 1995; Kenrick, Neuberg, Zierk, & Krones, 1994; Singh, 1993, 1994, 1995b; Singh & Luis, 1995; Singh & Young, 1995; Symons, 1995; Wade, 2000, 2003), attractiveness for women is based on facial and bodily cues, as well as physical qualities that signal these characteristics.

Bodily Characteristics

Recent research indicates that the lumbar curve is an important bodily characteristic. Men focus on the lumbar curve to determine which women have the optimal level of vertebral wedging that allows for a shift of the center of their mass back over their hips during pregnancy. This shifting of the center of mass allows for less hip torque, lower back pain, spinal injury and compromised fitness (Whitcome, Shapiro, & Lieberman, 2007; White & Punjabi, 1990). Thus, Lewis, Russell, Al-Shawaf and Buss, (2015) report that men find women whose lumbar curve is closer to the optimal angle of 45.5° most attractive. Additionally, women's waist size is an indicator of their risk for disease, is used to assess their hormonal status, and is correlated with cardiovascular disorders, diabetes, and gall bladder problems (Björntorp, 1988; Singh & Young, 1995). Therefore, women who appear to have small hips, small waists, medium to small buttocks, and medium legs (Wiggins, Wiggins, & Conger, 1968) are considered more attractive, healthier, more feminine, most fertile, and better potential mothers (Singh, 1993, 1994, 1995b; Singh & Young, 1995; Symons, 1995). A woman with small hips can meet the .70 WHR criterion since that ratio is based on the size of the hips in relation to the size of the waist. So, women with large hips and women with small hips can both have a .70 WHR. Women's breasts and the appearance of their stomachs also play a role in attractiveness, health, and fecundity assessments (Singh, 1993, 1994, 1995b; Singh & Luis, 1995; Singh & Young, 1995; Symons, 1995). Gynoid fat (due to estrogen) is distributed on the abdomens of women (Björntorp, 1987; Singh, 1993, 1994, 1995b), and women with large breasts are considered more attractive, more feminine, and healthier, and consequently most desirable for long- and short-term relationships (Singh & Young, 1995). Vocal pitch also plays a role since pitch indexes developmental stability (Hughes, Harrison, & Gallup, 2002). Collins and Missing

(2003) report that men find women with higher pitched voices more attractive, and Hughes, Mogilski, and Harrison (2014) report that men find women with hoarser voices more sexually attractive.

The Most Important Attractiveness Characteristic

Singh (1993, 1995b) and Björntorp (1987) report that gynoid fat is distributed on the thighs, legs, buttocks, waist, and hips of women. With that in mind, Singh and Luis (l995), Symons (1995), and Singh and Randall (2007) report that the most important and most visible physical cue for judging women's attractiveness is the waist-to-hip ratio (WHR). The WHR indexes the distribution of upper and lower body fat, and is a stable measure (Singh, 1993; Ashwell, Cole, & Dixon, 1985). It is related to crucial endocrine states associated with fecundity and successful mothering, and femininity is inferred from it (Singh, 1993, 1994, 1995b). Healthy pre-menopausal women have WHRs between .67 and .80 (Symons, 1995), and women with a WHR of .7 have been found to be healthiest, most attractive, and most reproductively fit (Singh, 1993; Singh & Luis, l995; Singh & Randall, 2007). Since attractiveness is biologically based, and has such significance, the correlates of attractiveness are said to be universal (Buggio, *et al*., 2012; Hönn, & Göz, 2007; Wade, 2000, 2003). Research supports this for the WHR. Body size preferences have changed over time (Buggio, *et al*., 2012). However, the most attractive WHR has remained constant. Singh (1993) reports that even though Miss America contest winners and Playboy models became slimmer from the 1950s to the 1990s, the most appealing WHR was still .70 or less. Similarly, Singh (2006) reports that beauty contest winners in 18 countries including the USA, Austria, Greece, Hong Kong, and Indonesia, as well as the Venus de Milo and ancient African, Indian, Greek, and Egyptian sculptures, all have WHRs of .70 or less. Thus, a WHR of .70 or less is said to be universally appealing. So, the WHR should also be an index of attractiveness for Black women. Specifically, Black women with a WHR of .70 or less should be considered most attractive. However, this has not been verified for Black women. One way to address this omission is to examine the WHRs of Black female beauties over time. If WHR has so much biological significance and a WHR of .70 or less is universally appealing, a WHR of .70 or less should be appealing for Black women as well. The present research addresses this by examining Black women selected by JET magazine editors as their "Beauties of the Week" from 1965 to 2007. JET is a weekly magazine that was founded in 1951 by John H. Johnson and marketed to African Americans. It includes world and national news, beauty tips, entertainment news, and fashion tips. From 1965 to 2007, JET included a picture of a Black woman, along with her chest, waist, and hip measurements. This woman was often referred to as the JET "Beauty of the Week". To become a JET "Beauty of the Week", Black women submitted their photographs, along with their chest, waist, and hip measurements, to the magazine. The editors of JET then selected the JET Beauty from these submissions for their weekly issue. Since the measurements of the JET Beauty of the Week were included in the magazine, one can easily compute the WHR. These WHRs can then be compared to the WHR

criterion that is said to be a universal criterion of beauty, i.e., less than or equal to .70.

Hypothesis

JET "Beauties of the Week" from 1965 to 2007 will meet the universal WHR criterion of .70 or less indicating, attractive, healthy, and fecund women.

METHOD

Stimuli

The stimuli included 649 Black women from issues of JET magazine from 1965 to 2007. The editors of JET magazine had selected these women for their beauty. They were subsequently deemed Beauties of the Week.

Procedure

The measurements of the "Beauties of the Week" were used to calculate WHRs by dividing the waist measurement by the hip measurement, consistent with prior research (Singh, 1993). The years 1965 to 2007 were examined because the JET "Beauty of the Week" was not included in the magazine prior to 1965, or if she was included in the magazine in the years prior to 1965, her measurements were not included. Also, after 2007, the JET "Beauty of the Week" photo included in the magazine no longer provided the woman's measurements.

RESULTS

Mean WHR for each year from 1965 to 2007 was computed by averaging the WHRs for each JET Beauty for each year. Mean WHRs ranged .64 to .78, M = .67, SD = .024, Mdn = .68, see Table 1. One extreme outlier (M = .78 for year 2005) was excluded because it was more than 4.5 times the SD; the overall mean WHR was re-calculated. Mean WHRs for the JET "Beauties", excluding the outlier, ranged from .64 to .72, M = .67, SD = .018, Mdn = .675, see Table 1. By dropping this outlier, the estimated trend line was not overly influenced by its presence (see information below).

Table 1. Descriptive statistics for mean WHRs for JET "Beauties of the Week" from 1965 to 2007.

Sample	N	Range	M(SD)	Mdn
With Extreme Outlier	43	.64 to .78	.67(.024)	.680
Without Extreme Outlier	42	.64 to .72	.67(.018)	.675

Next, a directional Z-test (Hays, 1981; Kanji, 2006) was computed comparing the overall mean WHR to .70, the ideal criterion for universally accepted beauty (Singh, 2006). The overall mean WHR (M = .67), excluding the outlier, was significantly less than .70, z = -10.86, p < .00001. A comparison of the overall mean WHR including the extreme outlier was also computed. The overall mean including the outlier was also significant, z = -8.055, p < .00001. With and without the extreme outlier, the WHR of the JET Beauties was less than the universal WHR mean of .70.

Figure 1 shows a scatterplot of mean WHRs (excluding the outlier). Next, a linear regression was computed. The mean WHR of the JET Beauties, excluding the outlier, was the dependent variable and year was the predictor variable. The relationship was statistically significant, $F(1, 41) = 35.98$, p < .0001. JET "Beauty of the Week" WHRs increased over time, unstandardized B = .001 and standardized, B = .688, p < .0001; time (in years) accounted for 47% of the variability in mean WHRs (R^2 = .47, Adjusted R^2 = .46), see Figure 1.

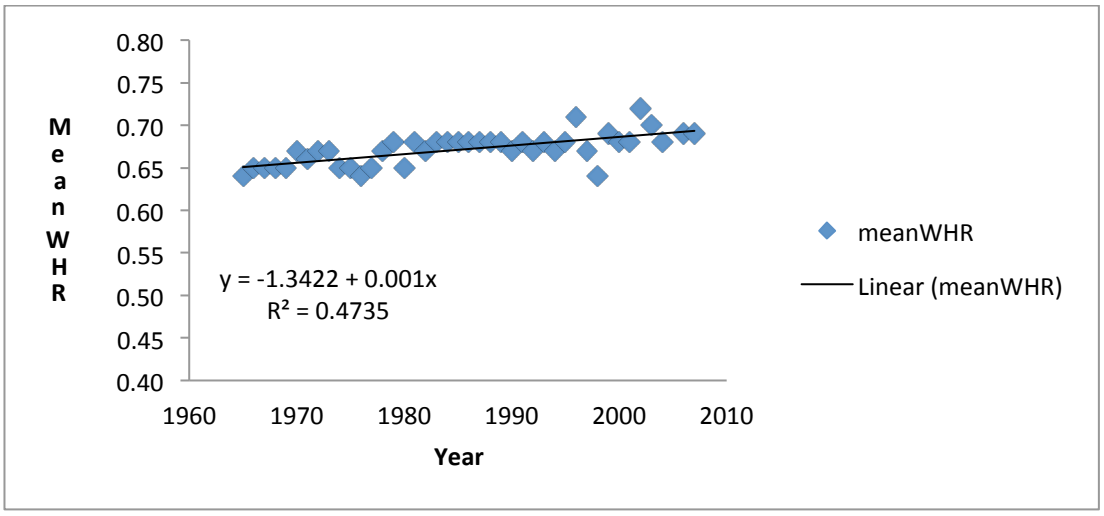

Figure 1. Mean WHRs for JET "Beauties of the Week" by year (extreme outlier omitted). The trend is positive and linear for mean WHRs over time.

DISCUSSION

The results were consistent with the hypothesis. JET Beauties of the Week had WHRs that ranged from .64 to .72 with a mean WHR less than .70, which is indicative of attractiveness and overall health. These results suggest that attractiveness of Black women was assessed by the editors of JET using the same criterion for attractiveness of women in other cultures, which is consistent with Singh (2006). This finding further supports the idea that WHR, as an indicator of overall health and fecundity, has universal biological significance.

Interestingly, the WHRs of the JET Beauties of the Week increased about 8% from 1965 to 2007. However, this finding was still within the expected range for overall health and beauty, i.e., .7 or less. The increase may be due to changes in diet and job-related energy expenditure. Ogden, Fryar, Carroll, and Flegal (2004) report that among adults in all race/ethnic groups in the US from 1960 to 2002, mean weight increased more than 24 pounds. Additionally, daily occupation-related energy expenditure decreased by more than 100 calories over the last 50 years in the US (Church, Thomas, Tudor-Locke, Katzmarzyk, Earnest, Rodarte, *et al*., 2011). The increase in weight and decrease in caloric output may have led to an increase in waist sizes which would increase WHRs.

These results add further support to evolutionary theory showing that a characteristic that has biological significance for survival also plays a role in attractiveness assessments for Black women. Even though there have been cultural changes in body size trends (Buggio, *et al.*, 2012), the WHR that is most attractive is still .70 or less. The universal criterion for an attractive body shape also accounts for perceptions of Black women's beauty.

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