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Female physical attractiveness in Britain and Malaysia: A cross-cultural study

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Abstract

Two purported cues to perceived female physical attractiveness are body mass index (BMI) and body shape as measured by the waist-to-hip ratio (WHR). This study examined the relative contribution of both cues in several culturally socio-economically distinct populations. Six hundred and eighty-two participants from Britain and Malaysia were asked to rate a set of images of real women with known BMI and WHR. The results showed that BMI is the primary determinant of female physical attractiveness, whereas WHR failed to emerge as a significant predictor. The results also showed that there were significant differences in preferences for physical attractiveness along a gradient of socio-economic development, with urban participants preferring images of women with significantly lower BMIs than their rural counterparts. The findings are discussed in terms of evolutionary psychological explanations of mate selection, and sociocultural theory, which emphasises the learning of preferences for body sizes in social and cultural contexts.

Keywords: Physical attractiveness; Waist-to-hip ratio; Body mass index

Introduction

Some investigators within the field of evolutionary psychology have argued for the existence of universally shared criteria of attractiveness, which are potent cues to a person's potential reproductive success (Buss, 1994, 1999; Buss & Schmitt, 1993; Kenrick, 1995; Symons, 1979, 1995). Within this paradigm, males and females are believed to select partners that will enhance their reproductive success, and there has been a concurrent emphasis on the attractiveness of salient morphological features. The latter are said to honestly signal that one individual is more 'desirable' than another (Buss, 1994, 1999). In women, two potentially critical cues are body shape and weight scaled for height, or the body mass index (BMI).

For shape in women, research has focused on the ratio of the width of the waist to the width of the hips (the waist-to-hip ratio, or WHR). A low WHR (i.e. a curvaceous body) is suggested to correspond to the optimal fat distribution for high fertility (Wass,

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Waldenstrom, Rossner, & Hellberg, 1997; Zaadstra et al., 1993), and so this shape should be highly attractive. This suggestion is supported by studies that have asked subjects to rate for attractiveness a set of line-drawn figures of women's bodies (Furnham, Tan, & McManus, 1997; Singh, 1993a, 1993b, 1994a, 1994b, 1995). WHR in these figures is varied by altering the torso width around the waist, but this not only alters the WHR, but also the apparent BMI. As the value of the WHR rises, so does that of the apparent BMI, and so it is not possible to say whether changes in attractiveness ratings are made on the basis of WHR or BMI, or both (Tovée & Cornelissen, 1999; Tovée, Maisey, Emery, & Cornelissen, 1999). This problem is also found in studies using edited photographic images of women, where their WHR has been artificially altered by thickening or narrowing their torsos (e.g. Henss, 2000). Altering the torso width also altered apparent body mass, and so once again, the WHR and BMI were co-varied.

When digital photographs of real women are used, BMI seems to be the most important predictor to judgements of attractiveness, with WHR serving as one of a number of secondary cues to attractiveness (e.g. Puhl & Boland, 2001; Tovée & Cornelissen, 2001; Tovée, Hancock, Mahmoodi, Singleton, & Cornelissen, 2002; Tovée, Reinhardt, Emery, & Cornelissen, 1998; Tovée et al., 1999). It is not simply that this paradigm is insensitive to shape cues, as when women are asked to rate male images in the same format and under the same experimental conditions, the primary determinant of male attractiveness is upper body shape—specifically waist-to-chest ratio (Tovée et al., 1999). The finding that BMI may be the primary determinant of female attractiveness is consistent with the fact that successful female fashion and glamour models all fall within a narrow BMI range (Tovée, Mason, Emery, McCluskey, & Cohen-Tovée, 1997). It is well established that changes in BMI also have a strong impact on health (Manson et al., 1995; Willet et al., 1995) and reproductive potential (Frisch, 1988; Lake, Power, & Cole, 1997; Reid & Van Vugt, 1987). So a mate choice strategy based on BMI also favours reproductive success.

If judgements of attractiveness are an innate preference, then it might be suggested that these preferences should be consistent across cultures. While many studies using observers from industrialised societies show similarities in their preferences (Connally, Slaughter, & Mealy, submitted for publication; Furnham, McClelland, & Omer, 2003; Furnham, Moutafi, & Baguma, 2002; Furnham et al., 1997; Henss, 2000; Markey, Tinsley, Ericksen, Ozer, & Markey, 2002; Singh, 2000, 2001, 2002; Singh & Henss, submitted for publication; Singh & Luis, 1995; Singh & Young, 1995; Streeter & McBurney, 2003), other cross-cultural studies (particularly those which have included observers from rural or non-industrialised cultures) have shown apparent differences in the preferences expressed by people in different cultures across the world (e.g. Craig, Swinburn, Matenga-Smith, Matangi, & Vaughn, 1996; Furnham & Alibhai, 1983; Furnham & Baguma, 1994; Furnham et al., 2002; Marlowe & Wetsman, 2001; Wetsman & Marlowe, 1999; Wilkinson, Ben-Tovin, & Walker, 1994; Yu & Shepard, 1998, 1999). However, these differences are not necessarily inconsistent with an evolutionary explanation, as it might be argued that they represent adaptations to local environmental conditions, rather than arising through different cultures (Sugiyama, 2004; Tovée & Cornelissen, 1991, 2001). To clarify this ambiguity, it is necessary to explore the attractiveness preferences from groups of observers from same racial group, but who have grown up and live in different cultural surroundings.

Malaysia has experienced rapid, if unequal, socio-economic transformation in recent decades, and furnishes a natural laboratory in which to examine preferences for physical attractiveness. In different parts of Malaysia, people live in industrialised, semi-industrialised and rural environments, and this allows us to explore the effect of industrialisation on standards of female attractiveness. As we also tested observer groups of racial origin from the same environment (Malay, Chinese and Indian in Kuala Lumpur), we can also explore whether there are differences based on race when socio-economic environment remains constant.

Methods

Participants

The participants of this study were recruited from two countries, Britain and Malaysia, there being five