

THE PERCEPTION OF MALAYSIAN RURAL AND URBAN INDIGENOUS WOMEN ON BODY IMAGE

(Persepsi Wanita Orang Asli Bandar dan Luar Bandar di Malaysia terhadap Imej Tubuh)

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Abstract

This study investigates the perception of body image among indigenous women in Peninsular Malaysia. Using a sample drawn from urban (n=38) and rural (n=21) settings, the study engages participants who are more or less socio-economically acculturated to mainstream society in order to explore different attitudes to body

image, and anxiety level about social physique between rural and urban women. Rural indigenous women registered a higher level of body dissatisfaction than their urban counterparts. However, there was no significant difference in attitudes towards body image between indigenous women in both locations. Due to a degree of presumed acculturation to western ideals of body image, urban indigenous women who were not underweight showed a higher anxiety level concerning their physique than those from rural areas with a similar body size. It was also found that a higher level of body dissatisfaction correlated with a poorer body image among indigenous women in Malaysia.

Keywords: Body Image, indigenous, Malaysian, perception, rural-urban, women

Abstrak

Kajian ini meneroka persepsi imej badan di kalangan wanita Orang Asli di Semenanjung Malaysia. Sampel kajian diambil dari persekitaran bandar (n = 38) dan luar bandar (n = 21) melibatkan peserta yang menghadapi kekangan sosio-ekonomi yang tidak sejajar dengan masyarakat umum dalam memperinci perbezaan ketidakpuasan tubuh, kepuasan terhadap imej, dan tahap kegelisahan sosial fizikal antara wanita Orang Asli bandar dan luar bandar. Wanita Orang Asli di luar bandar mencatatkan tahap ketidakpuasan badan yang lebih tinggi berbanding dengan wanita Orang Asli dari kawasan bandar. Namun, tidak ada perbezaan yang ketara dalam sikap terhadap imej badan antara wanita Orang Asli di kedua-dua lokasi tersebut. Didapati juga tahap ketidakpuasan badan yang lebih tinggi adalah sejajar dengan imej badan yang kurang memuaskan di kalangan wanita Orang Asli di Malaysia. Kerana tanggapan dimana pengaruh kebudayaan Barat terhadap imej badan, wanita Orang Asli di kawasan bandar yang tidak ada masalah berat badan menunjukkan tahap kegelisahan yang lebih tinggi mengenai fizikal mereka berbanding wanita dari luar bandar dengan ukuran badan yang serupa. Didapati juga tahap ketidakpuasan yang lebih tinggi terhadap bentuk imej badan berkolerasi dengan imej bentuk badan yang lebih rendah kalangan wanita Orang Asli di Malaysia.

Kata kunci: Imej tubuh, orang asli Malaysia, bandar dan luar bandar, persepsi wanita

INTRODUCTION

Body image perception refers to the way people see, think about, feel about and act towards their own physical attributes, and how these attributes appear as a whole to other people (Humenikova & Gates 2008; Khor *et al.* 2009). Concerns about body image include weight, shape and size. The emphasis on appearance causes

concern with how the body image is perceived by others. This can eventually lead to a reduction in the development of negative individual self-perception and self-esteem (Emmons, 1994; Meland, Haugland, & Breidablik 2007). However, persistent preoccupation with body image can lead to body image disturbance and body dissatisfaction. Along with the increasing pressure on females to desire a body shape which conforms to the predominant global “ideal” Body Mass Index (BMI), those with a poor body image are susceptible to emotional and behavioural distress, low self-esteem, anxiety, problems with interpersonal relationships, and a higher risk of eating disorders (Paquette & Raine 2004; Nabila, Essmat, Amal, & Entisar 2011).

Body image has attracted much attention in art and philosophy, and more recently in psychology and nutrition science. It is consistently reported in the body image literature that the majority of affluent Western women have a negative body image perception, since a thin body is much desired as the ideal (Cash & Pruzinsky 2002; Bearman, Presnell, Martinez, & Stice, 2006; Frederick, Peplau, & Lever 2006; Smolak 2006). Some studies have drawn attention to differences in ideal body size according to socioeconomic status (Swami & Tovée 2005; Swami & Tovée 2007; Swami, Knight, Tovée, Davies, & Furnham 2007; Swami, Kannan, & Furnham 2010). In less developed societies, for example, plumpness (the condition of having an excess of body fat, <https://www.merriam-webster.com/thesaurus/plumpness>) can be associated with fertility, sexuality, and attractiveness (Brown, 1991; Teti, 1995 as quoted in Swami *et al.*, 2010). This is consistent with the finding that indigenous people in different countries, being less affluent and geographically segregated, were more likely to want to gain weight than the mainstream community (Swami & Tovée, 2005, 2007; Cinelli & O’Dea, 2009). However, it is found that rural women in some western countries, including Austria (Swami *et al.*, 2010) and Australia (Mellor, McCabe, Ricciardelli, & Bali, 2004), showed levels of body dissatisfaction similar to their urban counterparts. The body image issue has been shown to be even more complex by studies among minority ethnic groups finding “evidence of ‘acculturation’ effects” and perception on body image (Mellor *et al.*, 2004, p. 290). Some cross-cultural researchers have also asserted that non-western women become subtly acculturated to western societal perceptions and attitudes, so that they are prone to sociocultural influences promoting the thin female ideal, with consequently greater concerns about body image (Davis & Katzman, 1999; Lee & Lee, 2000).

Malaysia is multiracial by nature with three main ethnics groups Malay, Chinese and India together with other sub ethnics and indigenous groups. Previous studies of body image in Malaysia have relied on samples taken from the three main ethnic groups in West Malaysia, i.e. Malays, Chinese and Indians. It is important to note

that most body image research has in the past largely focused on urban societies. Minimal research, by contrast, has been undertaken on body image perception in rural indigenous communities, let alone comparative work between rural and urban locations, to see whether acculturation can make a difference to perceptions of body image. However, there has in fact been a pioneering study investigating body image among rural and urban indigenous ethnic groups in Sabah in East Malaysia (Swami *et al.*, 2011), and little is known about how West Malaysian indigenous women, those of Jakun, Temuan, Semelai and so forth, perceive their bodies. To begin with, there is great diversity among indigenous communities in West and East Malaysia, some continuing a simple lifestyle in remote areas, while others in urban areas have adopted the practices, socio-economically *per se*, of the mainstream society.

According to the Malaysian Department of Statistics (2010), 76.9% of the indigenous population were beneath the poverty line, and 35.2% were classified as “hardcore poor”. Indigenous people in Malaysia are among the poorest and most marginalized groups, and they can have poor health and social outcomes (World Bank, 2011). Among indigenous peoples of West Malaysia, known in Malay as Orang Asli ‘original people’ or ‘first people’, are generally the descendants of the earliest inhabitants of the Malay Peninsula. It was reported in 2004 that there were 149,723 Orang Asli, making up approximately 0.5% of the national population (Jabatan Hal Ehwal Orang Asli (JHEOA), 2006). They are officially divided into three main groups, namely Negrito, Senoi and Proto-Malays, this last group being further divided into 18 sub-groups (Chua, Zalilah, Chin, & Norhasmah, 2012). They are diverse in their socio-cultural life, including traditions, beliefs, and languages. The Orang Laut, Orang Seletar and Mahmeri live in coastal areas, whereas others including the Temuan, Jakun and Semai are found mostly in the interior, and practise agriculture and manage their own rubber, oil palm or cocoa farms. Approximately 40% of indigenous people in West Malaysia, including the Semai, Temiar, Che Wong, Jahut, Semelai and Semoq Beri, live close to or within forested areas. A very small number of communities, especially Negrito groups, are still semi-nomadic (migrate seasonally) and depend on the seasonal bounties of the forest. In contrast, a fair number are to be found employed in urban areas (Masron, Masami, & Norhasimah, 2013).

The present study attempts to investigate differences in body dissatisfaction, attitude towards body image, and anxiety level among indigenous women in Malaysia who are more or less socio-economically acculturated to the mainstream society. In this way, it is hoped to engage more acculturated and less acculturated participants in order to explore possible acculturation effects associated with body perception. It is essential to work with indigenous women to address important health issues such as body image.



Figure 1 Map of Desa Temuan, Damansara Perdana.
(Google Map, <https://www.google.com/maps/@3.1701528,101.6009308,15z>, n.d.)



Figure 2 Map of Desa Jakun, Semelai and Temuan Muadzam Shah, Pahang.
(Google Map, <https://www.google.com/maps/@3.0926464,102.8231032,10z>, n.d.)

A good understanding of how women in this community perceive their body image and the potential impacts on their psychosocial concerns will provide insights to enable health and education professionals to address these issues more effectively.

METHODOLOGY

Participants

A total of 59 indigenous participants were sampled from two locations in the states of Selangor and Pahang. Those from Selangor were from Damansara Perdana (refer Figure 1), which is an allocated area of 18 of 256 hectares developed by Mustapha Kamal Land Saujana Triangle Sdn Bhd since 1996 for commercial development (Ding, 2016). Those from Pahang came from several villages close to Muadzam Shah.

Table 1

The distribution of participants from urban and rural areas

	Urban (%)	Rural (%)	Total (%)
Ethnic Group			
Temuan	38 (100)	1 (4.8)	39 (66.1)
Jakun	0 (0)	13 (61.9)	13 (22)
Semelai	0 (0)	7 (33.3)	7 (11.9)
Age Group			
< 21	5 (13.2)	4 (19)	9 (15.3)
21-30	14 (36.8)	6 (28.6)	20 (33.9)
31-40	10 (26.3)	6 (28.6)	16 (27.1)
41-50	6 (15.8)	4 (19.0)	10 (16.9)
51	3 (7.9)	1 (4.8)	4 (6.8)
Educational Level			
No formal education	2 (5.3)	9 (42.9)	11 (18.6)
Primary education	17 (44.7)	2 (9.5)	19 (32.2)
Secondary education and above	19 (50.0)	10 (47.6)	29 (49.2)
Occupation			
Housewife	25 (65.8)	20 (95.2)	45 (76.3)
Working	10 (26.3)	0 (0)	10 (16.9)

	Urban (%)	Rural (%)	Total (%)
Student	3 (7.9)	1 (4.8)	4 (6.8)
Marital Status			
Single	4 (10.5)	3 (14.3)	7(11.9)
Married	32 (84.2)	16 (76.2)	48 (81.4)
Widow	2 (5.3)	2 (9.5)	4 (6.8)
BMI Classification			
Underweight	5 (13.2)	5 (23.8)	10 (16.9)
Normal weight	13 (34.2)	9 (42.9)	22 (37.3)
Overweight	9 (23.7)	4 (19.0)	13 (22.0)
Obese	11 (28.9)	3 (14.3)	14 (23.7)
TOTAL	38 (100)	21 (100)	59 (100)

Urban participants. There were 38 *Temuan* women (age $M = 32.05$, $SD = 1.78$, median = 30.50) from Desa Temuan in Damansara Perdana, most of whom were housewives (65.8%), just over a quarter (26.3%) were paid workers, and the remaining 7.9% were students. Of these, 5.3% had no formal education, 44.7% had primary education and 50.0% had secondary education; 10.5% were single, 84.2% were married, and 5.3% were widowed. The median number of children for those who were married was 3 ($M = 3.05$, $SD = 0.42$). Their Body Mass Index (BMI) was on average 27.34 ± 1.37 kg/m², the median being 25.11 kg/m².

Rural participants. 21 women (age $M = 33.33$, $SD = 2.61$, median = 33) were selected from three indigenous villages twenty to thirty kilometers from Muadzam Shah. Most were *Jakun* (61.9%), 33.3% were *Semelai*, and 4.8% were *Temuan*. Almost half had no formal education (42.9%), 9.5% had primary education, and 47.6% had secondary education. Almost all (95.2%) were housewives and only 4.8% were students. 14.3% were single, 76.2% were married, and 9.5% were widowed. The median number of children for those who were married was again 3 ($M = 3.81$, $SD = 0.69$). Their average Body Mass Index (BMI) was 22.77 ± 1.31 kg/m², and the median was 21.20 kg/m².

MATERIALS

A questionnaire in Malay language was chosen as the instrument to collect primary data from the participants, in order to ascertain the following:

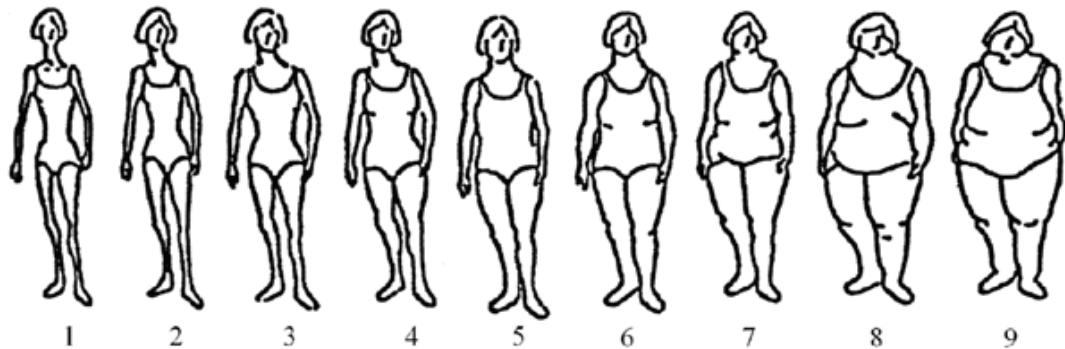


Figure 1 Female images of the figure rating scale.
(Adopted from Stunkard *et al.*, 1983)

Socio-demographic details: age, ethnicity, location, educational level, occupation, marital status, number of children, body weight and height. The BMI was calculated by dividing weight (kg) by height (m²); the participants were classified as underweight, normal weight, overweight, or obese according to WHO [2017] criteria.

Using the Stunkard Figure Rating Scale. The Stunkard Figure Rating Scale (5 items) was used to identify body shape perceptions. The questions asked the participants to select the body shape that they perceived as ideal and closest to their current body shape from a scale featuring nine silhouette figures ranging from thin to the obese (see Figure 1). Body size dissatisfaction was computed as the difference between the perceived current and ideal body sizes. While a score of zero indicated body satisfaction, a negative score represented a preference for a thinner body size, and a positive score implied a desire to be fatter. Cronbach's Alpha for this total scale was 0.606.

Attitude towards body image (6 items) using a five-point scale: The questions in this case reflected the importance and comparison of physical attractiveness, body weight perception, self-confidence, and self-consciousness. The body image score was calculated by adding up the responses, a lower score indicating a bad attitude towards body image. The scores ranged from 6 to 30, and Cronbach's Alpha for this scale being 0.646.

Social Physique Anxiety Scale (12 items): These questions measured the level of anxiety experienced by the participants regarding their physique in social situations. The score was computed by adding the responses, which ranged from 12 to 60. The Cronbach's Alpha for this total scale was 0.894.

Procedure

Approval having been obtained from the University of Malaya ethnics committee, convenience sampling was used to target the indigenous women as the specific pre-defined group. They were recruited between June and December 2016 from Desa Temuan Damansara, and three villages located about 30km from Muadzam Shah, namely Kampung Ganoh, Kampung Kemomoi, and Kampung Biru. In each area, convenience sampling was used to collect responses on the ground that it was a relatively fast, inexpensive method and most indigenous women are reluctant to be interviewed.

The purpose and process of the study were explained to the participants, and they were assured that the data collected would be used for study purposes only and anonymised. Having given their informed consent, the participants answered an interviewer-administered questionnaire, and took part in semi-structured interviews.

Body weight and height was measured without shoes in participants' homes following standard procedures. A portable bathroom scale was used to measure weight correct to the nearest 0.1kg, and a measuring tape attached to a wall was used to measure height correct to the nearest 0.1cm.

Before statistical analyses were made, the dataset was inspected, and cleared of outliers. It is of paramount importance to be familiar and understand the structure of data and the nature of the variables in the data collected. Eventually, there were no observations excluded since the survey session was well administered by the Principal Investigator and a Research Assistant.

Statistical Analyses

All analyses were carried out using the Statistical Package for the Social Sciences (SPSS) version 22.0. One-way ANOVA and a Kruskal-Wallis test were used to measure the main effect of the demographic background on body image perception, including body dissatisfaction, the attitude towards the body image, and the level of anxiety concerning social physique.

To investigate possible differences in body image perceptions among women from the two groups, Analysis of Covariance (ANCOVA) was used, taking the location as the independent variables, and the demographic characteristics which have significant main effect on the body image perception as covariates. In all cases, the level of significance was set at $\alpha = 0.05$.

RESULTS

Preliminary analyses

Kolmogorov-Smirnov and Shapiro-Wilk normality tests showed that that Attitude towards Body Image (ABI) scores and Social Physique Anxiety Scores (SPAS) were normally distributed, whereas Body Dissatisfaction Scores (BDS) were not. ABI and SPAS were taken to be parametric in nature, and were analysed using One-way ANOVA, while BDS was analysed using a Kruskal Wallis test the demographic variables being used as independent variables for each test. The results are presented in Table 2.

The results presented in Table 2 show no significant differences at the 0.05 significance level in mean body image perception scores according to age group ($p_{BDS} = 0.622$, $p_{ABI} = 0.438$, $p_{SPAS} = 0.730$), occupation ($p_{BDS} = 0.693$, $p_{ABI} = 0.96$, $p_{SPAS} = 0.962$), marital status ($p_{BDS} = 0.163$, $p_{ABI} = 0.715$, $p_{SPAS} = 0.352$). There were significant differences in Body Dissatisfaction Scores according to educational background ($\chi^2 (2)=6.283$, $p=0.043$). The mean score for body image perception also differed significantly at the 0.05 significance level according to BMI classification ($p_{BDS} = 0.0001$, $p_{ABI} = 0.001$, $p_{SPAS} = 0.002$).

In the light of these results, educational qualifications were included as covariate in Body Dissatisfaction Scores, while the BMI was included as covariates in all subsequent analysis dealing with body image perception.

Table 3 presents the stratified means, standard deviations and percentage distributions of body image perception scores (i.e. Body Dissatisfaction Score (BDS), Attitude towards Body Image (ABI), and Social Physique Anxiety Score (SPAS)). It can be observed that 47.62% of the rural women but only about 11% of the urban women were satisfied with their current body shape. The majority of the women (urban: 65.79%, rural: 76.19%) wanted to be thinner, with means of -2.20 ± 0.71 and -2.38 ± 1.26 respectively, while 23.68% of the urban women and 19.05% of the rural women wanted to be bigger. Urban women wanting to be bigger had a greater mean score of 1.56 ± 0.53 than their rural counterparts whose mean score was 1 ± 0 .

Most of the women (urban: 60.53%, rural: 71.43%) reported a moderate attitude towards their body image with mean scores of 18.35 ± 2.39 and 17.67 ± 2.53 respectively. About 31.58% of the urban women and 19.05% of the rural women reported a negative attitude towards their body image, the mean score for the urban women (24.58 ± 1.98) being slightly greater than for the rural women (23.25 ± 1.26). Only a tiny minority (urban: 7.89%, rural: 9.52%) showed a positive attitude.

Table 2 Body image perception scores by age group, educational level, occupation, marital status, and BMI classification.

	Body Dissatisfaction Score (BDS)		Attitude towards Body Image (ABI)		Social Physique Anxiety Score (SPAS)	
	<i>H(df)</i>	<i>p</i>	<i>F(df)</i>	<i>p</i>	<i>F(df)</i>	<i>p</i>
Age group	4.954(4)	0.292	0.959(4)	0.438	0.508(4)	0.730
Educational level	6.283	0.043**	2.195(2)	0.121	1.663(2)	0.199
Occupation	0.824(2)	0.662	0.041(2)	0.96	0.038(2)	0.962
Marital status	3.629(2)	0.163	0.337(2)	0.715	1.065(2)	0.352
BMI classification	28.378(3)	0.0001***	6.380(3)	0.001***	5.482(3)	0.002***

***, **, and * represent statistical significance at 1%, 5% and 10% respectively

H = Kruskal Wallis test statistics; F = F test statistics; df = degrees of freedom; p = p-value

Table 3 Stratified body image perception.

Body of Perception	Urban			Rural		
	M	SD	n(%)	M	SD	n(%)
Body Dissatisfaction Score	-1.08	1.75	38 (100)	-1.62	1.77	21 (100)
Desired to be thinner [-8,-1]	-2.20	0.71	25 (65.79)	-2.38	1.26	16 (76.19)
Satisfied with current body [0]	0	0	4 (10.53)	0	0	10 (47.62)
Desired to be bigger [1,8]	1.56	0.53	9 (23.68)	1	0	4 (19.05)
Attitude towards Body Image	19.87	4.17	38 (100)	18.24	3.65	21 (100)
Good [6,13]	12.67	0.58	3 (7.89)	12.50	0.71	2 (9.52)
Moderate [14,21]	18.35	2.39	23 (60.53)	17.67	2.53	15 (71.43)
Bad [22,30]	24.58	1.98	12 (31.58)	23.25	1.26	4 (19.05)
SPAS	37.92	10.67	38 (100)	42.90	10.23	21 (100)
High level of anxiety [12,25]	23.33	3.50	6 (15.79)	22.00	0	2 (9.52)
Moderate level of anxiety [26,41]	35.70	4.38	23 (60.53)	39.10	4.31	9 (42.86)
Low level of anxiety [42,60]	53.33	5.03	9 (23.68)	51.78	4.99	10 (47.62)

M=mean; SD=standard deviation; n=number of participant

Table 4 ANCOVA results for Body Dissatisfaction Score

	SS	df	MS	F	<i>p</i> -value
Location	6.830	1	6.830	4.589	0.037**
Education level	0.593	1	0.593	0.398	0.531
BMI	26.881	1	26.881	18.062	0.0001***
Location x Education level	3.212	1	3.212	2.158	0.148
Location x BMI	1.191	1	1.191	0.800	0.375
Education level x BMI	1.282	1	1.282	0.861	0.358
Error	77.392	52	1.488		
Total	179.661	58			

***, **, and * represent statistical significance at the 1%, 5% and 10% level respectively

SS = sum of square; df = degrees of freedom; MS = mean sum of squares; F = F test statistics; *p* = *p*-value

About 61% of the urban women exhibited a moderate level of anxiety regarding their physical appearance, 23.68% were slightly anxious, and about 16% extremely anxious. In contrast, 47.62% of the rural women showed a corresponding low level of anxiety, 42.86% were moderately anxious, while less than 10% experienced a high level of anxiety.

Analysis of covariance (ANCOVA) was carried out with the body image perceptions (Body Dissatisfaction, Attitude towards Body Image, Social Physique Anxiety) as dependent variables, and location as the independent variable. As previously, education level and BMI were treated as covariates in the analysis of Body Dissatisfaction Score, whereas only BMI was considered as covariate in the analysis of Attitude on Body Image Score and Social Physique Anxiety Score. The results are presented in Tables 4, 5, and 6.

Taking into account the effects of educational levels and BMI classification of the participants, the mean BDS between those of urban and rural area is reported to have statistical difference ($F(1) = 4.589$, $p = 0.037$), with urban participants reporting slightly higher mean score of BDS of -1.08 as compared to rural participants ($M = -1.62$). The effect of covariate BMI of the participants on Body Dissatisfaction Score is found to be statistically significant ($F(1) = 18.062$, $p = 0.0001$) as well, in which those with greater BMI reporting lower BDS (Underweight = 1.00, Normal = -0.95, Overweight = -2.08, Obese = -2.64).

Having the BMI classification of the participants as covariate, there is no significance difference in mean Attitude towards Body Image score between Indigenous women

Table 5 ANCOVA result of Attitude towards Body Image score.

	SS	df	MS	F	<i>p</i> -value
Location	8.553	1	8.553	0.670	0.417
BMI	129.488	1	129.488	10.142	0.002***
Location x BMI	19.901	1	19.901	1.559	0.217
Error	702.231	55	12.768		
Total	946.102	58			

***, **, and * represent statistical significance at the 1%, 5% and 10% level respectively
 SS = sum of squares; df = degrees of freedom; MS = mean sum of squares; F = F test statistics; *p* = *p*-value

Table 6 ANCOVA result of Social Physique Anxiety Score.

	SS	df	MS	F	<i>p</i> -value
Location	122.976	1	122.976	1.365	0.248
BMI	628.281	1	628.281	6.972	0.011**
Location x BMI	281.610	1	281.610	3.125	0.083*
Error	4956.527	55	90.119		
Total	6644.508	58			

***, **, and * represent statistical significance at the 1%, 5% and 10% level respectively
 SS = sum of squares; df = degrees of freedom; MS = mean sum of squares; F = F test statistics; *p* = *p*-value

from urban and rural setting ($F(1) = 8.553$, $p = 0.417$) at the significance level of $\alpha=0.05$. However, the effect of covariate BMI on the Attitude towards Body Image score is reported to be statistically significant ($F(1) = 10.142$, $p = 0.002$), whereby those with lower BMI have lower ABI score, indicating better attitude towards their body image (Underweight = 17.50, Normal = 17.82, Overweight = 19.46, Obese = 22.71).

At the significance level $\alpha=0.05$, the mean SPAS between those of urban and rural area is reported to have no significant difference ($F(1) = 1.365$, $p = 0.248$) after taking

into account the effects of BMI classification of the participants. Again, covariate BMI is reported to have statistical significant impact on the mean SPAS ($F(1) = 6.972$, $p = 0.011$) whereby those with greater BMI has lower SPAS, indicating that higher anxiety level on their social physique. At the significant level of $\alpha=0.10$, interaction effect between the participants' location and covariate BMI is found to have significant impact on the mean SPAS ($F(1) = 3.125$, $p = 0.083$).

Table 7 Mean and Standard Deviation of SPAS.

BMI Classification	Urban		Rural	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Underweight	46.00	11.23	41.20	15.27
Normal	42.77	10.37	44.56	5.41
Overweight	36.11	7.11	47.50	10.15
Obese	30.00	8.15	34.67	12.06

M = mean; SD = standard deviation

Table 7 compares the mean of SPAS among participants of different BMI classification and location. Among those who were underweight, the urban indigenous women tended to have higher mean SPAS (lower anxiety) than their rural counterparts. In contrast, the urban Indigenous women who were normal, overweight and obese were reported to have lower mean SPAS (higher anxiety) than their rural counterparts.

Table 8 Correlation among the different measure of body image perception.

	Body Dissatisfaction Score	Attitude towards Body Image	SPAS
Body Dissatisfaction Score		-0.42***	0.36***
Attitude towards Body Image	-0.42***		-0.61***
SPAS	0.36***	-0.61***	

***, **, and * represent statistical significance at 1%, 5% and 10% respectively

As shown in Table 8, it is reported that body satisfaction, attitude towards body image and the anxiety level on social physique are statistically correlated with each other at the significance level $\alpha=0.01$. The body dissatisfaction score is negatively correlated with the attitude towards body image, with the correlation coefficient of 0.42 ($p = 0.001$). This indicates that those who would like to be bigger tend to have a better attitude towards their body image whereas those who preferred a smaller body size have higher tendency to have a higher level of preoccupation with their body image.

It is also discovered that the satisfaction level towards body shape is moderately, positively correlated to the anxiety level on social physique ($r = 0.363, p = 0.005$). This implies that the participants who have the desire to be thinner are more likely to be anxious about their social physique and vice versa.

Correspondingly, the attitude towards body image is found to have a strong negative correlation with the anxiety level on social physique ($r = -0.61, p = 0.0001$), indicating that the indigenous women who have poorer attitude towards body image were more likely to be highly anxious about their social physique, and vice versa.

Discussion and Conclusion

This study investigated body image perceptions among indigenous women in two states in Malaysia, one in an urban, and the other in a rural location. The aim has been to engage participants who are more or less acculturated to mainstream society, in order to explore the differences in body dissatisfaction, attitude towards body image, and anxiety level in social physique between the two urban-rural groups.

Some noteworthy differences came to light concerning the women's satisfaction or dissatisfaction with their bodies. While the overall majority wanted to be thinner, almost half of the rural women were actually satisfied with their current body size, whereas only a minority of the urban women were similarly satisfied. Interestingly, this suggests that, after taking into account BMI and educational levels, the urban women were on average less dissatisfied than the rural women. This finding contradicts earlier evidence that body dissatisfaction may not be as great in less economically developed societies (McArthur, Holbert, & Peña, 2005; Mahmud & Crittenden, 2007; Swami, Kannan, & Furnham 2010).

In accordance with the findings of Swami and Chamorro-Premuzic (2008) and Swami, *et al.* (2011), covariate BMI is found to be statistically significant in Malaysia on the mean difference in Body Dissatisfaction Score, so that those with higher BMIs were more likely to be dissatisfied with their body shapes. It is possible that this

result reflects the spread of sociocultural pressures to indigenous women in rural areas in Malaysia to the same extent as in urban areas. This may imply that body dissatisfaction has become an intranational phenomenon, regardless of unevenly distributed socioeconomic development.

This study indicates that the majority of the indigenous women had moderate attitudes to their body image. Further examination of their locations showed no effect in relation to women's attitudes to their body image. However, those with higher BMIs were likely to have more negative attitudes to their body image. This is partially supported by Swami, Kannan, and Furnham (2011) on the assumption that there would be a more negative body image among urban participants in view of the growing rate of obesity in Malaysia.

On the other hand, the underweight women tended to have lower anxiety levels than their rural counterparts. The urban sample who were of normal weight, overweight and obese were found to have higher anxiety levels than the rural sample. As found in Tovée, Swami, Furnham, and Mangalparsad (2006)'s comparative study of Zulu migrants to Britain and Zulus in South Africa, the urban Malaysian women placed more importance on being lighter and thinner than the rural women. This could be due to the impact of Westernized cultural ideals of slimness, which has led to acculturation effects among urban indigenous women through social interaction and the media environment (Barber, 1998; Tovée, Swami, Furnham, & Mangalparsad, 2006). Lee and Lee (2000) assert that in a society experiencing rapid urbanization and socioeconomic development, the population tends to be exposed to propagation of the ideal body appearance of being young, slender and glamorous (cited by Swami, Kannan, & Furnham, 2010).

For a significant proportion of Malaysian indigenous women, dissatisfaction with their body size has led to a poor body image, especially for those who wished to become thinner. This finding is supported by the study by Khor *et al.* (2009). Subsequently, negative attitudes to body image are likely to influence women further and make them more anxious about their physical appearance.

While the current study has some interesting findings to contribute to the literature on body image perception in general, and on Malaysian indigenous women in particular, certain limitations are to be noted. This study is limited to body image perception among urban indigenous women in Selangor and rural indigenous women in Pahang. There was in fact a lack of data from indigenous women from very remote areas of Malaysia. In view of constraints of time and funding, the researchers were unable to use a probability sampling technique. Since a convenience sampling technique was used instead, there is necessarily a problem concerning sample desirability and

possible biased responses from the participants. Another shortcoming in this study is the validity and reliability of the results, as it depends greatly on the honesty of the respondents in answering the questionnaire. Moreover, the outcome of the study might not be accurate as some of the variables were measured qualitatively by subjective Likert scale ratings.

In future work, the scope of the study of body image perceptions among the Malaysian indigenous women could be expanded to include samples from other states in Malaysia and get more accurate and generalizable results. It would be useful to include matched non-indigenous comparison groups in future studies. Rather than relying on a simple classification of urban versus rural, researchers should seek to define the categories more precisely by considering differences in media exposure. In addition, longitudinal research would be necessary to explore more completely and shed more light on the trend over time of body image perceptions among Malaysian indigenous women.

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